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Investigations into Army Enlisted Classification Systems: Concurrent Validation Report

Michael Ingerick, Ted Diaz, and Dan Putka
Human Resources Research Organization

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14. ABSTRACT *(Maximum 200 words)*:

The Army faces a number of personnel needs as it transforms to meet the challenges of today and the near future. To meet these challenges, the Army is seeking recommendations on predictor measures, in particular measures of non-cognitive attributes (e.g., interests, values, and temperament), that could be administered to enhance Soldier selection and classification decisions. The U. S. Army Research Institute for the Behavioral and Social Sciences (ARI) conducted a Concurrent Validation (CV) research effort to advance this objective. The objectives of this research were twofold: (a) to examine the value of using new, experimental predictor measures to select recruits into the Army; and (b) to investigate the potential of new, experimental predictor measures to enhance the classification of recruits into entry-level jobs.

Criterion measures and experimental predictors were administered to 424 first-term Active Army Soldiers representing five military occupational specialties (MOS): (a) 11B Infantryman, (b) 19K Armor Crewman, (c) 25U Signal Support Systems Specialist, (d) 63B Light Wheeled Vehicle Mechanic, and (e) 68W Health Care Specialist. The value of the experimental predictor measures to enhance recruit selection and classification were examined. Overall, the results indicate that the experimental predictors show potential to increment the existing Armed Services Vocational Aptitude Battery (ASVAB) for the purposes of selecting recruits into the Army and classifying them into entry-level jobs.

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Investigations into Army Enlisted Classification Systems: Concurrent Validation Report

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We are also indebted to the military and civilian personnel who supported our data collection efforts, particularly those Soldiers and noncommissioned officers (NCOs) who participated in the research.

INVESTIGATIONS INTO ARMY ENLISTED CLASSIFICATION SYSTEMS: CONCURRENT VALIDATION REPORT

EXECUTIVE SUMMARY

Research Requirement:

To meet the challenges facing the Army, the Army needs predictor measures that will enhance entry-level Soldier selection and classification. One of the purposes of the Army Class project is to provide the Army with recommendations on which new experimental predictor measures (e.g., measures of interests, values, and temperament) demonstrate the greatest potential to enhance Soldier selection and classification. The present report documents a Concurrent Validation (CV) research effort conducted to advance this objective. The goal underlying this objective was to identify predictor measures with the potential to maximize outcomes valued by the Army, specifically the performance and retention of first-term enlisted Soldiers.

Procedure:

The criterion measures and experimental predictors were administered to 424 first-term Active Army Soldiers representing five military occupational specialties (MOS): (a) 11B Infantryman, (b) 19K Armor Crewman, (c) 25U Signal Support Systems Specialist, (d) 63B Light Wheeled Vehicle Mechanic, and (e) 68W Health Care Specialist. The criterion measures included (a) MOS-specific job knowledge tests (JKTs), (b) MOS-specific and Army-wide performance ratings collected from supervisors and peers, and (c) an assessment of Soldiers' current attitudes towards their MOS and the Army (the Army Life Questionnaire (ALQ). The experimental predictors administered in the CV included (a) two temperament measures (Rational Biodata Inventory (RBI) and Work Suitability Inventory (WSI), (b) a predictor situational judgment test (PSJT), and (c) two person-environment (P-E) fit measures (Work Values Inventory [WVI] and Work Preferences Assessment [WPA]). In addition, we also obtained scores on the Assembling Objects (AO) test, a spatial ability measure currently administered with the Armed Services Vocational Aptitude Battery (ASVAB) but not used to make operational selection and classification decisions.

To address the objectives of the CV project, two series of analyses were conducted. To examine the value of the experimental predictor measures for new recruit selection, we estimated and analyzed the incremental validity of the predictors over the existing ASVAB subtests (excluding Assembling Objects) and the Armed Forces Qualifying Test (AFQT), a composite of four ASVAB subtests measuring general cognitive ability. To investigate the value of the experimental predictor measures for classification, we estimated and analyzed the potential gains from using the predictors over the existing ASVAB to classify new recruits to the sample of five MOS.

Findings:

The purpose of the Army Class CV was to provide answers to two questions:

- Which experimental CV predictor measures have the potential to enhance the selection of new recruits?

- Which experimental CV predictor measures have the potential to enhance the classification of new recruits to entry-level MOS?

In regards to the first question, the results of our analyses show that the experimental CV predictor measures carry significant potential to increment the existing AFQT or ASVAB in predicting on-the-job or behaviorally-based performance criteria (i.e., what a Soldier does), but less potential in predicting knowledge-based criteria (i.e., what a Solider knows). All the experimental CV predictor measures, except PSJT and AO, consistently evidenced substantial gains in prediction over and above the AFQT and the ASVAB for the on-the-job performance criteria, technical and non-technical. Among the experimental predictors, the WVI or RBI generally emerged as the predictor with the greatest potential to increment the existing ASVAB in predicting Soldier performance. With respect to Soldier retention, all of the experimental CV predictor measures, except AO and to a lesser extent the PSJT, evidenced significant incremental validity over the AFQT and the existing ASVAB in predicting Soldiers' attitudes towards their MOS and the Army in general. Among the experimental CV predictor measures, the RBI generally emerged as the predictor with the greatest potential to increment the existing ASVAB in predicting Army-wide and MOS-specific retention criteria, followed by the WVI and the WPA.

In regards to the second question, the results of our analyses indicated that all of the experimental CV predictor measures carried significant potential to enhance the classification of Soldiers over the existing ASVAB, both for the purposes of maximizing Soldier job performance and, in particular, for maximizing Soldier retention. Consistent with the preceding findings, the classification potential of the experimental CV predictor measures was generally greater, on average, when maximizing retention than performance-based criteria. All other factors being equal, the CV predictor measures were more effective at differentiating Soldiers' attitudes towards their MOS than in differentiating Soldiers' performance in those jobs, at least for the group of jobs sampled in the CV. Among the experimental CV predictor measures, the WVI consistently emerged as the predictor evidencing the most potential to increment the existing ASVAB when classifying Soldiers to maximize job performance, followed by the WPA and WSI, the RBI and the PSJT. For promoting retention, the WVI, WPA, and WSI generally emerged as the experimental predictors evidencing the greatest classification potential, followed by the RBI.

Utilization and Dissemination of Findings:

These findings provide useful information to Army personnel managers and researchers regarding the potential of experimental predictor measures, in particular those measuring non-cognitive attributes (e.g., interest, values, and temperament), to increment the existing ASVAB for the purposes of selecting new recruits into the Army and classifying them into entry-level jobs. Several issues, however, should be considered when interpreting these findings as they carry implications for their generalizability to an operational context. These include, but are not limited to: (a) the representativeness of the CV sample of the Active Army Soldier population; (b) the susceptibility of the predictor measures to faking and coaching effects when administered in an applicant setting; and (c) differences between applicants' and experienced Soldiers' responses to the experimental predictor measures owing to differences in their time and experience in the Army. We are currently in the process of conducting a follow-up research effort, using a longitudinal validation design, to extend these findings and to examine the value of the predictor measures when administered in an operational context close to an applicant setting.

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SECTION 1: INTRODUCTION

Overview of the Army Class Project

Entry-level Soldiers must be placed in jobs that best utilize their knowledges, skills, abilities, and other attributes (KSAOs). The Army's transformation to Brigade Combat Teams (BCTs) requires Soldiers with a different mix of personnel characteristics. Because Soldiers will have limited opportunity for reclassification during the BCT lifecycle, an effective initial classification decision is a requirement for these Soldiers to perform well and to make the Army a career. Many factors determine how this critical placement decision is made. These factors include organizational (e.g., Army job needs, training opportunity availability), as well as individual factors (e.g., recruits' composite scores on the Armed Services Vocational Aptitude Battery [ASVAB], recruits' job preferences). Although opportunities to influence organizational factors are limited, better and more comprehensive assessment of new recruits carries the potential to enhance classification into Army jobs, resulting in valued Army outcomes (e.g., improved performance, increased satisfaction, and increased retention). Accordingly, the Army is interested in conducting research to develop and validate predictor measures to inform new recruit classification.

The purpose of the *Future Force Performance Measures (Army Class)* project is to investigate these issues. The Army Class project is currently envisioned as a 6-year research program sponsored by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) with contract support from the Human Resources Research Organization (HumRRO). The objectives of this project are (a) to identify and recommend strategies for conducting criterion-related validation research to improve the Army's recruit classification system, (b) to develop and validate predictor measures to aid the Army in classifying new recruits into jobs for the purposes of maximizing Soldier performance and retention while meeting Army personnel needs, and (c) to develop proficiency assessments for use in reclassifying experienced Soldiers into a targeted sample of jobs. Figure 1.1 provides an overview of the major activities underlying the first two objectives. The present report summarizes the results and findings from a Concurrent Validation (CV) research effort conducted in pursuit of the second objective. The primary goal of this investigation was to examine the value of new, experimental predictor measures for selection into the Army and for enhancing the classification of recruits to entry-level jobs.

The remainder of this Introduction is organized as follows. First, the objectives of the CV research effort are reviewed. Next the key features of the design of the CV research are summarized, including the Soldiers sampled and the predictor and criterion measures administered. The Introduction concludes with an overview of the rest of the report.

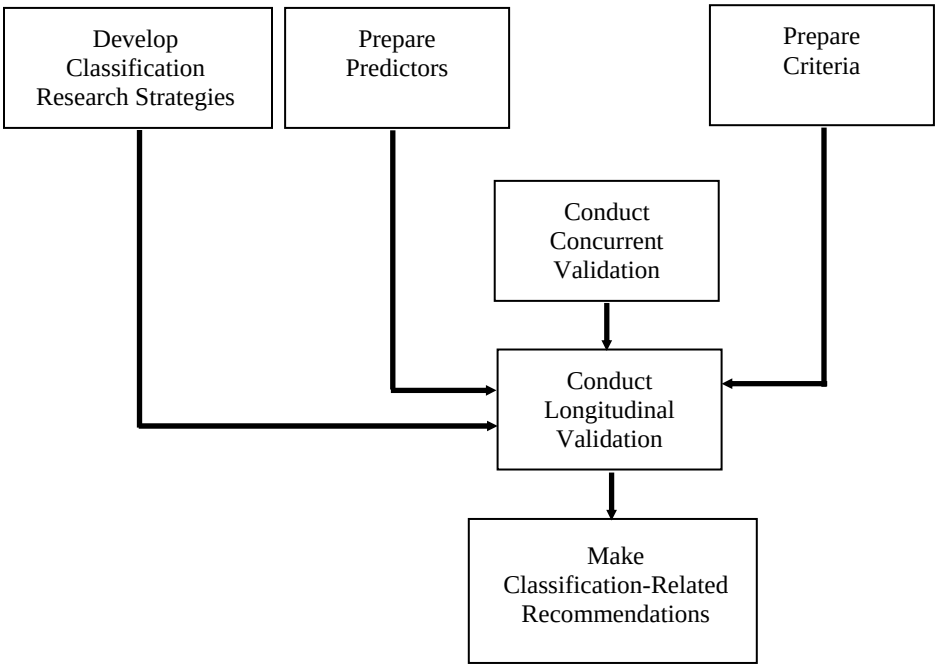

Figure 1.1. Overview of Army Class Research Plan

Concurrent Validation (CV) Research Objectives

As with the other Services, the Army currently uses a single predictor measure, the ASVAB, to classify new recruits into entry-level jobs, or military occupational specialties (MOS).[1] To meet the challenges facing the Army, the Army needs predictor measures that will enhance new recruit classification. A great deal of research supports the benefits of using cognitive ability measures, specifically the ASVAB, to classify new recruits into jobs (J. P. Campbell & Knapp, 2001; Scholarios, Johnson, & Zeidner, 1994; Zeidner, Johnson, Vladimirsky, & Weldon, 2000; 2003). Comparatively less is known about the classification potential of predictor measures assessing non-cognitive attributes (e.g., interests, values, and temperament), particularly for the purposes of maximizing early career Soldier retention and performance.

Accordingly, the CV research was conducted to answer two questions:

- Which experimental predictor measures have the potential to enhance the selection of new recruits into the Army over the existing ASVAB?

[1] Specifically, the Army uses a series of nine composite scores, referred to as Aptitude Area (AA) composite scores. AA composite scores are derived by combining scores on the nine ASVAB subtests currently in operational use. The current nine AA composites became operational in 2002. For a summary of the existing AA composites and the research leading to their implementation, see Greenston (2002).

- Which experimental predictor measures have the potential to enhance the classification of new recruits into entry-level jobs (or MOS) over the existing ASVAB?

In answering these questions, the goal was to identify predictor measures with the potential to maximize outcomes valued by the Army, specifically the performance and retention of first-term enlisted Soldiers.

In pursuing these objectives, the Army Class CV was intended to build upon and extend recent research conducted by the Army to develop and validate new, experimental predictor measures of KSAOs that are important to first-term Soldier performance and retention not currently assessed by the ASVAB (Knapp & Tremble, 2007). These research programs include *Maximizing Noncommissioned Officer (NCO) Performance for the 21st Century (NCO21), New Predictors for Selecting and Assigning Future Force Soldiers (Select21)*, and *Performance Measures for 21st Century Soldier Assessment (PerformM21)*. The NCO21 research was designed to identify and validate non-cognitive predictor measures of noncommissioned officer (NCO) performance for use in the junior NCO promotion system (Knapp, Burnfield, Sager, Waugh, J. P. Campbell, Reeve, R. C. Campbell, White, & Heffner, 2002; Knapp, McCloy, & Heffner, 2004). The Select21 research was designed to develop and validate new predictor measures for use in selecting and assigning first-term Soldiers into future jobs (Knapp, Sager, & Tremble, 2005; Knapp & Tremble, 2007). The emphasis of the PerformM21 research project was to examine the feasibility of instituting a performance assessment program Army-wide for junior NCOs (Knapp & R. C. Campbell, 2004, 2006; Moriarty & Knapp, 2007). Collectively, these three research efforts provide a strong theoretical and empirical foundation, including potential predictor and criterion measures, for examining strategies to enhance Soldier selection and classification.

CV Research Design

Sample

Consistent with the CV objectives, our goal was to collect data on enlisted Soldiers in their first term of enlistment with 9 to 48 months time in service. Defining the parameters for the sample in this way would enable us to collect data on first-term Soldiers at a time when their performance and retention-related attitudes have reasonably stabilized, on average, since the terms of service and length of time to complete technical training varies across Soldiers. The following five MOS were selected from which Soldiers were to be sampled:

- 11B (Infantryman)
- 19K (Armor Crewman)
- 25U (Signal Support System Specialist)
- 63B (Light Wheel Vehicle Mechanic)
- 68W (Health Care Specialist)

These five MOS, individually and collectively, were selected on the basis of multiple considerations, including but not limited to their importance to the Army's mission and priorities (e.g., as measured by the number of Soldiers assigned to and working in the MOS), the

opportunity to capture cross-MOS differences useful for examining the classification potential of the CV predictor measures, and the feasibility of developing MOS-specific criterion measures for use in the CV within the specified timeframe.

Criterion Measures

Selection of Criterion Measures for the CV

Consistent with the Army's personnel management goals, our objective was to select a reasonably comprehensive set of criterion measures that, taken together, would be useful for evaluating the potential of the Army Class predictors to maximize first-term Soldier performance and retention. In addition, because one of the objectives of this research effort is new recruit classification, we selected criterion measures that reflected both MOS-specific and Army-wide content. Accordingly, the following criterion measures were selected for inclusion in the Army Class CV:

- MOS-specific job knowledge tests (JKTs)
- MOS-specific and Army-wide performance rating scales (PRS)
- Army Physical Fitness Test (APFT) and Weapons Qualification scores (as self-reported on a Background Information Form)
- A self-report measure of Soldiers' attitudes about the Army and their MOS (Army Life Questionnaire, ALQ)

Table 1.1 provides a brief summary of each measure. Earlier versions of these measures were administered in Select21 and other prior research efforts (e.g., Project A).[2] A more detailed description of each criterion measure, as well as information on their preparation for the Army Class research effort, follows. All criterion measures (with the exception of the Soldier and Supervisor Background Information Forms) were computer-administered.[3]

Description and Preparation of Criterion Measures for the CV

MOS-Specific Job Knowledge Tests (JKTs)

For Soldiers to be effective in their MOS, they must know what to do and how to do it (e.g., how to load a tank main gun, how to troubleshoot the engine of a light wheeled vehicle). To measure the declarative and procedural knowledge required of first-term Soldiers in an MOS, MOS-specific JKTs were prepared and administered in the Army Class CV. In contrast to other performance measures (e.g., performance ratings), MOS-specific JKTs generally reflect "can

[2] Project A was an earlier large-scale research program to develop and to evaluate the potential of new experimental predictor measures of cognitive and non-cognitive attributes, at the time not measured by the ASVAB, to enhance the selection and classification of entry-level Soldiers. Project A was sponsored by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) and was conducted from 1982 through 1989. A comprehensive review of Project A and its findings, as well as those of a follow-on research program, Career Force (1990-1994), can be found in J.P. Campbell and Knapp (2001).

[3] Because signatures were required for the Privacy Act Statement, the Soldier and Supervisor Background Information Forms had to be administered in a paper and pencil version.

do", and specifically knowledge-based (i.e., what a Soldier *knows*), components of Soldier job performance.

Table 1.1. Summary of Army Class CV Criterion Measures

Criterion Measure	Description
Performance-Related	
MOS-Specific Job Knowledge Test (JKT)	Measured Soldiers' knowledge of the basic facts, principles, and procedures required of first-term Soldiers in an MOS (e.g., the major steps in loading a tank main gun, the main components of an engine). Each JKT consisted of about 50 questions representing a mix of item formats (e.g., multiple-choice, multiple-response, rank order, and drag and drop).
MOS-Specific and Army-Wide Performance Rating Scales (PRS)	Measured Soldiers' performance on two sets of dimensions required of first-term Soldiers: (a) MOS-specific (e.g., performs preventive maintenance checks and services, troubleshoots vehicle and equipment problems) and (b) Army-wide dimensions (e.g., exhibits effort and professionalism, works effectively with others, demonstrates physical fitness). The PRS were designed to be completed by the supervisors and peers of the Soldier being rated. Each PRS consisted of a definition of the dimension and a series of behavioral examples (or anchors) reflecting differing levels of Soldier performance (from "Below Expectations" to "Exceeds Expectations").
Background Information Form	Measured Soldiers' self-reported Army Physical Fitness Test (APFT) and Weapons Qualification scores, in addition to basic background information (e.g., MOS, race, ethnicity, and gender).
Retention-Related	
Army Life Questionnaire (ALQ)	Measured Soldiers' self-reported attitudes about the Army and their MOS that are predictive of first-term attrition and retention. The ALQ consisted of eight scales (62 items) measuring two categories of Soldier attitudes. The first category focused on Soldiers' intentions to remain in the Army and consisted of two scales measuring their attrition intentions, re-enlistment intentions, and intentions to make the Army a career. The second category focused on Soldiers' experiences in the Army and consisted of six scales measuring Soldiers' satisfaction and perceived fit with the Army and with their MOS.

Note. See Human Resources Research Organization (2005) for additional information on these criterion measures.

MOS-specific JKTs were prepared for all five targeted MOS: 11B Infantryman; 19K Armor Crewman; 25U Signal Support Specialist; 63B Light Wheel Vehicle Mechanic; and 68W Health Care Specialist. The content of the JKTs was derived from MOS-specific performance requirements identified through job analysis and other job-relevant information (e.g., Soldier Manuals, Programs of Instruction). JKTs had been developed for two MOS (11B and 25U) in Select21 (Knapp & Tremble, 2007) and for the other three MOS (19K, 63B, and 68W) in PerformM21 (Knapp & R. C. Campbell, 2004, 2006). The 11B, 25U, 63B, and 68W JKTs administered in the CV were generally unchanged from these versions. The 11B and 25U tests were fairly comprehensive, although some 11B items were dropped that had performed poorly in Select21. The 63B and 68W tests were less comprehensive and included some content that was not suitable for the entry-level Soldiers tested in this project. The 19K test was lengthy, so items

were eliminated to shorten the test, particularly the high fidelity but relatively time-consuming items that had been included to demonstrate what could be done with animation previously developed for training applications. Each JKT consisted of about 50 items, on average, and used a mix of item formats (multiple-choice, multiple-response, rank order, and drag and drop).

Same as the CV predictor measures, the MOS-specific JKTs were administered by computer. All the JKTs were reviewed and pre-tested using HumRRO and ARI staff prior to data collection with Soldiers.

MOS-Specific and Army-Wide Performance Rating Scales (PRS)

Understanding first-term Soldier performance requires measuring what Soldiers actually *do* on the job in addition to what they *know*. To supplement the MOS-specific JKTs, we prepared PRS intended to capture behaviorally-based, rather than knowledge-based, components of performance. Although performance ratings raise potential issues when used as criterion measures (e.g., low interrater reliability), we prepared PRS and data collection procedures designed to maximize the information obtained using this measurement method (i.e., efficient and comprehensive coverage of the performance space) while minimizing the disadvantages commonly associated with them (e.g., low interrater reliability, susceptibility to rating errors such as halo and leniency bias). For example, because different raters potentially have different opportunities to observe Soldier performance behaviors, our goal was to collect performance ratings on each Soldier from multiple raters, specifically at least one supervisor and three peers. Accordingly, the PRS were designed to be completed by both the supervisors and peers of the Soldier being rated.

To ensure as comprehensive coverage of the performance space as feasible, we prepared two sets of PRS, reflecting both "can do" and "will do" dimensions of first-term Soldier performance. The first set focused on MOS-specific performance dimensions or dimensions required of first-term Soldiers in an MOS that, taken together, differentiate the MOS from other MOS (e.g., performs preventive maintenance checks and services, troubleshoots vehicle and equipment problems). The second set focused on Army-wide performance dimensions generally required of all first-term Soldiers, regardless of MOS (e.g., exhibits effort and professionalism, works effectively with others).

Like the MOS-specific JKTs, the content of the MOS-specific PRS was based on performance requirements identified through job analysis and other job-relevant information (e.g., Soldier Manuals). Of the five targeted MOS, MOS-specific PRS were available for three MOS (11B, 19K, and 25U) from Select21, which we used without modification (Knapp & Tremble, 2007). For the remaining two MOS (63B and 68W), we had MOS-specific PRS from Project A (J. P. Campbell & Knapp, 2001) that we used as a starting point. We adapted these scales to the Select21 rating scale format and then made minor modifications based on more recent information specific to these MOS. Finally, we worked with supervisors in these MOS who participated in the first CV data collection to finalize these PRS.

In addition to the MOS-specific performance dimensions, scales were prepared to measure three Army-wide performance dimensions. These dimensions were as follows:

- *Exhibits Effort and Professionalism*: Puts effort into completing work, accepts responsibility, exhibits selfless service and discipline, and pursues his or her own training and development.
- *Works Effectively with Others*: Treats peers courteously and respectfully, provides help and assistance to others, and demonstrates tolerance and respect of other cultural and social backgrounds.
- *Demonstrates Physical Fitness*: Meets Army standards for physical fitness, strength and weight, and displays military bearing.

These Army-wide dimensions were identified through a comprehensive job analysis of the performance requirements of all first-term Soldiers (Sager, Russell, R. C. Campbell, & Ford, 2005). PRS measuring these dimensions, or components of these dimensions, were available from Select21. The PRS measuring *Exhibits Effort and Professionalism* combined three of the Select21 scales (Exhibits Effort and Initiative, Professionalism/Personal Discipline, Personal/Professional Development). The PRS measuring *Works Effectively with Others* subsumed two Select21 scales (Supports Peers, Exhibits Tolerance). The PRS measuring *Demonstrates Physical Fitness* was drawn directly from the Select21 scale, with no modifications.[4]

Each PRS was similarly structured, consisting of a definition of the selected performance dimension and a series of behavioral examples (or anchors) representing differing levels of Soldier performance (e.g., Neglects own assigned tasks, creating more work for others; Carries own fair share of the team's work; Always carries the load of the work for the team). Raters were instructed to rate the Soldier on the basis of the definition and the behavioral examples (or anchors) using a 1-7 scale (ranging from "Below Expectations" to "Exceeds Expectations").

A brief training protocol was provided to raters prior to making their ratings. The rater training consisted of (a) a description of the performance dimensions and their anchored rating scales, (b) a discussion of common rating errors (e.g., halo) and recommendations on how to avoid them, and (c) an emphasis on the importance of using the dimension definitions and anchors to make the ratings.

The PRS were administered electronically using a custom MS Windows-based application, which was available for use starting with the second CV data collection. Two supplemental software programs were also developed to manage the ratings process (e.g., assignment of peer raters, keeping track of who has been rated by whom). The PRS were reviewed and piloted using HumRRO and ARI staff prior to data collection with Soldiers.

[4] Administering the PRS measuring the three Army-wide dimensions also has the practical advantage of making the PRS appear more complete to raters.

Background Information Form

Two self-report items were included on the Background Information Form as additional performance-related criteria. One item measured the Soldier's most recent Army Physical Fitness Test (APFT) score and the other the Soldier's most recent Weapons Qualification score.[5] These items were taken directly from Select21. Because predictor measures of physical or psychomotor abilities required of first-term Soldiers were not administered, we excluded these scores from our analyses.[6]

Army Life Questionnaire (ALQ)

The Army invests significant resources to develop and to train Soldiers. When Soldiers leave the Army either prematurely (i.e., attrition) or voluntarily at the end of their enlistment term, the costs to the Army are high. Accordingly, the Army is interested in maximizing first-term Soldier retention by ensuring that new recruits are classified into jobs that best match their KSAs and other attributes (e.g., interests, values, and temperament). The ALQ measures Soldiers' self-reported attitudes about the Army and their MOS that are predictive of first-term attrition and retention (Strickland, 2005). The ALQ was administered in part because the concurrent nature of the current research effort precluded the collection of data on Soldiers' actual retention behavior (e.g., Soldier attrition or re-enlistment).

The ALQ prepared for the Army Class CV consisted of eight scales, summarized in Table 1.2. The eight scales were intended to measure two categories of Soldier attitudes. The first category focused on Soldiers' intentions to remain in the Army and consisted of two scales measuring their attrition cognitions, re-enlistment intentions, and intentions to make the Army a career. The second category focused on Soldiers' experiences in the Army and consisted of six scales measuring Soldiers' satisfaction and perceived fit with the Army and with their MOS.

[5] APFT and Weapons Qualification scores are currently not available from the Enlisted Master File (EMF) or a secondary Army personnel database readily accessible to personnel researchers.

[6] Several of the predictor measures administered include a scale(s) measuring non-cognitive attributes indicative of recruit's motivation or interest in physically-oriented work and activities (e.g., the Rational Biodata Inventory (RBI) includes a Fitness Motivation scale that measures the motivation to regularly engage in physical exercise and activities). Accordingly, a "will do" criterion measure, the Demonstrates Physical Fitness PRS, was included in our analyses.

Table 1.2. ALQ Scale Descriptions

Scale	Description
Attrition Cognitions	Three-item scale measuring the degree to which Soldiers think about attriting before the end of their first-term (e.g., "How likely is it that you will complete your current term of service?").
Career Intentions	Five-item scale measuring Soldiers' intentions to re-enlist and to make the Army a career (e.g., "How likely is it that you will re-enlist in the Army?").
Satisfaction with Army	Ten-item scale measuring Soldiers' satisfaction with Army life in general (e.g., "How satisfied are you with your life as a Soldier?").
Satisfaction with MOS	Nine-item scale measuring Soldiers' satisfaction with their MOS (e.g., How satisfied are you with your opportunity to perform work you find interesting?").
Perceived Army Fit	Ten-item scale measuring Soldiers' perceived fit with the Army in general (e.g., "The Army is a good match for me.").
Perceived MOS Fit	Ten-item scale measuring Soldiers' perceived fir with their MOS (e.g., "My MOS provides the right amount of challenge for me.").
Perceived Competence	Seven-item scale measuring Soldiers' perceived competence to perform their work (e.g., "I have trouble meeting the demands of Army life.").
MOS Exceeds Expectations	Seven-item scale measuring the degree to which Soldiers' MOS exceeds their pre-enlistment expectations (e.g., "My MOS is far different from what I thought it would be when I enlisted.").

The Army Class ALQ consisted of 62 items, mostly derived from the 99-item version first administered in Select21.[7] Consistent with the current research effort's focus on examining the classification potential of the experimental predictor measures, most of the dropped items reflected Army-wide content. In addition, more MOS-specific content was added, specifically (a) new items to enhance the scale measuring a Soldiers' perceived fit with their MOS and (b) a new scale measuring Soldiers' pre-service expectations about their MOS. For each item, Soldiers rated the extent to which they agreed with the item using a 5-point Likert scale (e.g., 1 = "Strongly Disagree" to 5 = "Strongly Agree").

Predictor Measures

Selection of Predictor Measures for the CV

Consistent with the project's objectives, our goal was to select predictor measures that (a) would predict first-term Soldiers' performance and retention and (b) would enhance the selection and classification of entry-level Soldiers over the existing ASVAB. Multiple factors were considered in this selection process, including (a) the measure's potential to enhance entry-level Soldier selection and classification based on prior research and other relevant information (e.g., job analysis identifying KSAOs important to first-term Solider performance and retention), (b) the time required to complete the measure, and (c) the measure's appropriateness for

[7] The ALQ was formerly titled the Army Life Survey (ALS) in Select21.

administration in a CV design. All of the experimental predictor measures considered for inclusion in the Army Class CV were developed and previously administered, in some form, in Select21 and other prior research efforts.

Table 1.2 lists and summarizes the predictor measures selected for inclusion in the Army Class CV, based on the findings from Select21 (see Knapp & Tremble, 2007) and guidance from the Select21 Scientific Review Panel (SRP).[8] Table 1.3 provides a mapping of these predictor measures to KSAOs identified as important to entry-level Soldier performance and retention (Knapp & Tremble, 2007). Because we wanted to achieve a paperless data collection for the Army Class CV, all predictor measures (except for the ASVAB, whose scores were obtained from Soldiers' personnel records) were computer-administered. In the following sections, we provide a description of the predictor measures and information on their preparation for the CV.

[8] The Select21 Scientific Review Panel (SRP) consisted of experts not affiliated with the Army or HumRRO with significant experience with personnel selection and classification issues that provided scientific guidance and oversight during the Select21 project. The members of the SRP were Wally Borman, Bruce Orvis, Fred Oswald, Ken Pearlman, and Ben Schneider.

Table 1.3. Summary of Army Class CV Predictor Measures

Predictor Measure	Description
Baseline Predictors	
Armed Services Vocational Aptitude Battery (ASVAB)	Measures specific cognitive abilities and aptitudes predictive of entry-level Soldier performance. The existing ASVAB consists of the following subtests: General Science (GS), Arithmetic Reasoning (AR), Math Knowledge (MK), Word Knowledge (WK), Paragraph Comprehension (PC), Auto & Shop Information (AS), Mechanical Comprehension (MC), Electronics Information (EI), and Assembling Objects (AO). AO is currently administered operationally, but is not used to inform recruit selection and classification decisions.
Armed Forces Qualification Test (AFQT)	Measures new recruits' general cognitive ability. The AFQT is a unit-weighted composite based on four ASVAB subtests (AR, MK, WK, and PC). Applicants must meet a minimum score on the AFQT to enter the Army.
Temperament Predictors	
Rational Biodata Inventory (RBI)	Measures temperament (or motivational) characteristics important to entry-level Soldier performance and retention. Items ask respondents about their past behavior, experiences, and reactions to previous life events (e.g., the extent to which they enjoyed thinking about the "plusses and minuses" of alternative approaches to solving a problem).
Work Suitability Inventory (WSI)	Measures respondents' beliefs about the types of work they would perform best. Respondents rank order 16 statements describing different types of work required of entry-level Soldiers (e.g., work that requires leading, taking charge, giving direction) in terms of how well they would perform the work. Content is based on a slightly modified version of the temperament taxonomy formulated in the Army's Project A.
Predictor Situational Judgment Test (PSJT)	Measures respondents' judgment and decision-making across situations commonly encountered by recruits prior to or during their first-term of enlistment (e.g., dealing with a difficult co-worker). Each item consists of a description of a problem situation and a list of four alternative actions that the respondent might take in that situation. Respondents rate the effectiveness of each action.
Person-Environment (P-E) Fit Predictors	
Work Preferences Assessment (WPA)	Measures respondents' preferences for various work activities, work environments, and learning opportunities offered by different jobs (e.g., repairing machines or equipment). Items ask respondents to rate how important a series of characteristics are to their ideal job. Content is based on Holland's (1997) theory of vocational personality and work environment.
Work Values Inventory (WVI)	Measures the value respondents place on different work characteristics (e.g., opportunity to learn new skills, make decisions on one's own). Respondents rank order a series of 28 work characteristics in terms of their importance to their ideal job. Content is primarily based on Dawis and Lofquit's (1984) theory of work adjustment.

Note. See Human Resources Research Organization (2006) for additional information on the experimental predictor measures, including sample items.

Table 1.4. Army Class CV Predictor Measures by Type and KSAOs Assessed

Attribute		**Measure**					
Type	**KSAOs**	ASVAB	WPA	WVI	WSI	RBI	PSJT
Aptitude/ Declarative Knowledge	Reading Skill/ Comprehension	X					
	Basic Math Facility	X					
	General Cognitive	X					
	Spatial Relations	X					
	Basic Electronics Knowledge	X					
	Basic Mechanical Knowledge	X					
Procedural Knowledge & Skill	Self-Management Skill						X
	Self-Directed Learning						X
	Sound Judgment						X
Temperament	Team Orientation				X		X
	Agreeableness				X	X	X
	Cultural Tolerance				X	X	
	Social Perceptiveness				X		X
	Achievement Motivation				X	X	X
	Self-Reliance				X	X	
	Affiliation				X	X	
	Potency				X	X	
	Dependability				X	X	X
	Locus of Control					X	
	Intellectance				X	X	
	Emotional Stability				X	X	
Interests	Realistic		X				
	Investigative		X				
	Artistic		X				
	Social		X				
	Enterprising		X				
	Conventional		X				
Values	Growth			X			
	Comfort			X			
	Stimulation			X			
	Status			X			
	Altruism			X			
	Self-Direction			X			

Description and Preparation of Predictors for the CV

Baseline Predictors

The current Army selection and classification system relies primarily on the ASVAB. Accordingly, the existing ASVAB served as the baseline against which the experimental predictors were compared. The ASVAB measures multiple specific cognitive abilities and aptitudes predictive of entry-level Soldier performance. The current ASVAB consists of nine subtests – eight operational subtests and one experimental subtest, Assembling Objects (AO). At this time, AO is administered to applicants but is not used to inform operational selection and classification decisions. For selection into the Army, applicants must meet a minimum score on the Armed Forces Qualification Test (AFQT). The AFQT is a unit-weighted composite of four ASVAB subtests (Arithmetic Reasoning, Math Knowledge, Word Knowledge, and Paragraph Comprehension) that reflects an applicant's standing on general cognitive ability. For classification to an MOS, the applicants' ASVAB subtest scores are aggregated to form nine Aptitude Area (AA) composite scores, which are then compared to the minimum AA score(s) set for each MOS. For the current research, Soldiers' AFQT and ASVAB subtest scores (on the eight operational subtests) served as the baselines for evaluating the experimental predictors' potential to enhance selection and classification.

Although not currently used to make operational selection and classification decisions for the Army, we included scores on the Assembling Objects (AO) subtest as another experimental predictor to be evaluated in our analyses. AO is a subtest assessing spatial ability first developed in Project A. Past research has shown that AO could supplement one or more of the existing ASVAB subtests in predicting entry-level Soldier performance, while potentially yielding lower gender differences than subtests measuring comparable abilities (Peterson, Russell, Hallam, Hough, Owens-Kurtz, Gialluca, & Kerwin, 1992; Russell, Reynolds, & J. P. Campbell, 1994).

ASVAB subtest (including AO) and AFQT scores were extracted from Soldier personnel records for use in the current research.

Temperament Predictors

Prior research has shown that the ASVAB is a psychometrically sound measure of cognitive ability and a strong predictor of entry-level Soldier job performance in general and MOS-specific technical performance in particular (i.e., "can do" dimensions of performance). Accordingly, the experimental predictors selected for the Army Class CV emphasized noncognitive characteristics not measured by the ASVAB that have been found to predict social-motivational dimensions of entry-level Soldier performance (i.e., more "will do" dimensions of performance, e.g., teamwork, effort, physical fitness), as well as retention (i.e., attrition and reenlistment behavior), another important outcome for which the Army is interested in maximizing.

Rational Biodata Inventory (RBI)

The RBI measures multiple temperament (or motivational) characteristics important to entry-level Soldier performance and retention. The measure, in various forms, has been used in prior Army research and operational applications (e.g., for selection into Special Forces) for several years. Items on the RBI ask respondents about their past behavior, experiences, and reaction to previous life events using Likert-style response options (e.g., the extent to which they enjoyed thinking about the plusses and minuses of alternative approaches to solving a problem). The RBI yields scores on a range of characteristics (e.g., Achievement Motivation, Cognitive Flexibility, Fitness Motivation, Hostility to Authority, Peer Leadership, Self-Efficacy, and Stress Tolerance).

For the Army Class CV, we reviewed the RBI scales and, in an effort to shorten the measure, selected the scales most likely to be useful for entry-level Soldier classification. Scales not expected to be particularly useful for classification (e.g., Achievement Motivation, Hostility to Authority, Internal Locus of Control, Peer Leadership, Narcissism, and Self-Efficacy) were deleted and a new Team Orientation scale was added. The resulting Army Class CV RBI had 66 items.

Work Suitability Inventory (WSI)

The WSI measures a respondent's beliefs about the types of work they would perform best. The measure's content is based on a slightly modified version of the temperament taxonomy that underlies the Occupational Information Network's (O*NET's) work styles domain (Borman, Kubisiak, & Schneider, 1999). The WSI consists of 16 statements describing different types of work commonly required of entry-level Soldiers (e.g., work that requires leading, taking charge, giving direction). Respondents are instructed to rank order the statements in terms of how well they would perform the work described (from most successfully to least successfully). Each statement corresponds to a temperament characteristic (e.g., Attention to Detail, Cooperation, Initiative). The WSI response format is advantageous in that it mitigates the potentially deleterious effects of response distortion typically associated with traditional self-report measures. For example, the WSI can be scored in multiple ways, across different outcomes of interest, further reducing the potential for respondents to rank the statements in a single, desired pattern. The WSI yields a score for each temperament characteristic that, as mentioned, can then be combined or modified in multiple ways based on additional data to achieve one or more of the Army's personnel management objectives. For the Army Class CV, we administered the Select21 version of the WSI without modification.

Predictor Situational Judgment Test (PSJT)

The PSJT measures respondents' judgments and decision-making across a range of challenging situations (e.g., working to meet a deadline, dealing with a difficult co-worker). PSJTs are advantageous because they (a) measure KSAOs that are difficult to assess with traditional self-report formats (e.g., social skills) and (b) are moderately predictive of job performance, evidencing significant incremental validity over general cognitive ability measures,

such as the AFQT, while yielding comparatively smaller race/ethnic group differences. The situations presented on the PSJT reflect situations that first-term Soldiers typically experience prior to joining the Army or that parallel the kinds of situations they would commonly encounter during their first few months in service. Each item consists of a description of the situation, followed by a list of four alternative actions that the respondent might take. Respondents rate the effectiveness of each action on a 1 to 7 scale (from “Ineffective” to “Very Effective”). The PSJT yields a single, total score. For the Army Class CV, we shortened the PSJT from 26 to 20 items by dropping items that did not appear to add reliable variance to the PSJT score based on analyses from Select21.

Person-Environment (P-E) Fit Predictors

Consistent with the Army’s personnel management objective to maximize first-term Soldier retention, in addition to performance, we selected a two predictor measures focused on assessing person-environment (P-E) fit. P-E fit reflects the congruence between an individual’s personal characteristics and his or her work environment (e.g., organization, team, job). High P-E fit means that an individual’s work environment positively reinforces his or her work interests, values, and other characteristics. By classifying new recruits into jobs that best match their interests, values, and other characteristics, the Army enhances the likelihood that a Soldier will complete his or her first term and potentially re-enlist for a second one.

Work Preferences Assessment (WPA)

The WPA measures respondents’ preferences for (or interests in) various work activities, work environments, and learning opportunities offered by different jobs (e.g., work repairing machines or equipment). The content of the WPA is based on Holland’s (1997) theory of vocational personality and work environment. According to Holland’s theory, work interests are expressions of personality that can be used to categorize individuals and work environments into six types (or dimensions): Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). The 72 items comprising the WPA are designed to measure one of these six dimensions and their subfacets. The WPS contains three types of items: (a) interests in work activities (e.g., "A job that requires me to teach others"), (b) interests in work environments (e.g., "A job that requires me to work outdoors"), and (c) interests in learning opportunities (e.g., "A job in which I can learn how to lead others"). Respondents are asked to rate each item in terms of its importance to their ideal job using a 5-point Likert-type scale (1 = “Extremely unimportant to have in my ideal job” to 5 = “Extremely important to have in my ideal job”). The WPA yields six dimension scores (corresponding to each of the six RIASEC dimensions) and 14 facet scores (corresponding to facets underlying the six RIASEC dimensions). Like the WSI, these raw scores can then be combined or modified based on additional data to obtain alternative sets of scores for use in one or more of the Army’s personnel management objectives.

Work Values Inventory (WVI)

The WVI measures the value respondents place on different work characteristics (e.g., opportunity to learn new skills, make decisions on one's own). The content of the WVI is primarily based on Dawis and Lofquit's (1984) theory of work adjustment. A key component of Dawis and Lofquit's theory is a taxonomy of occupational reinforcers. These occupational reinforcers represent a variety of work characteristics that reinforce one or more values individuals deem important in their ideal job. The WVI consists of a series of 28 statements, each describing a work characteristic that is potentially reinforced by a job. Each statement corresponds to a work value construct (e.g., Autonomy, Comfort, Personal Development, Social Status, Travel). Comparable to the WSI, respondents rank the 28 statements in terms of its importance to their ideal job (from highest importance to lowest importance). After ranking the 28 statements, respondents then denote which work characteristics reflected in the statements are important to have on their ideal job and which ones are unimportant to have on their ideal job. Like the WSI, the WVI yields a score for each work value that can then be combined or modified in multiple ways based on additional data to achieve one or more of the Army's personnel management objectives. Similarly, the WVI's response format and flexible scoring procedures render it less susceptible to response distortion than traditional self-report measures of comparable characteristics. For the Army Class CV, we administered the Select21 version of the WVI without modification.

All the predictor measures were reviewed and pre-tested using HumRRO and ARI staff prior to data collection with Soldiers.

Other CV Predictor Preparation Activities

Three of the Army Class CV predictor measures (the WPA, WVI, and WSI) can also be scored using organizational or job characteristics (i.e., environment-side) data. These data have typically been collected from NCOs and reflect NCOs' judgments about the extent to which the Army in general (or their MOS, specifically) affords Soldiers an environment that reinforces their interests, values, or work styles. In the CV, we wanted to supplement the environment-side data gathered in Select21 with more MOS-specific ratings. Therefore, we automated (and renamed) the measures that had been used for this purpose in Select21. These measures are summarized in Table 1.5.[9]

[9] Past research has found that alternative scoring schemes that use job-side data to score the WPA, WVI, or WSI generally produce comparable results to those obtained using the raw scale scores (Putka, 2007; Putka & Van Iddekinge, 2007). Accordingly, we based our analyses on the raw scale scores for these measures.

Table 1.5. Job-Side Measures Administered to NCOs

Measure	Description
Job Characteristics Inventory (JCI)	Measures the extent to which the MOS provides a work environment consistent with the six RIASEC dimensions based on Holland's (1997) theory of vocational personality and work environment (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional). Content relates to scoring options for the Work Preferences Assessment (WPA).
MOS Description Inventory (MDI)	Measures the extent to which the MOS reinforces 28 work values, primarily based on Dawis and Lofquist's (1984) theory of work adjustment. Content parallels the Work Values Inventory (WVI).
Work Requirements Inventory (WRI)	Measures the extent to which 16 work styles characterize the work required in the MOS. Content parallels the Work Suitability Inventory (WSI).

Overview of Report

This remainder of this report is organized as follows. Section 2 describes the CV data collection and final sample. Section 3 first describes our analysis approach and then presents the results from our analyses examining the potential of the experimental predictor measures to enhance the selection and classification of first-term Soldiers over and above the existing ASVAB. Section 4 summarizes the main findings and conclusions from these analyses. The Appendices at the end of this report provide more detailed information on the psychometric properties of the CV predictor and criterion measures and additional results from our analyses.

SECTION 2: DATA COLLECTION AND DATABASE DEVELOPMENT

Data Collection Schedule and Soldier Counts

The commands at five installations provided research support for the CV. In securing support, ARI requested participation by first-term enlisted Active Army Soldiers representing one of the five targeted MOS and at least one supervisor per participating Soldier. The support request defined "first-term Soldier" as a Soldier serving in his or her first term of service and as having completed between 9 and 48 months time in service (TIS). There were Soldiers that appeared for and participated in the data collection sessions whose TIS was outside of that specified by ARI's request. However, these Soldiers were excluded from the CV analyses.

Table 2.1 summarizes the number of Soldiers meeting our TIS criteria from whom data were collected in the CV by MOS and site. Data were collected from a total of 424 Soldiers. Consistent with our targets, data were collected on approximately 100 Soldiers per MOS, except for 25U.

Table 2.1. CV Soldier Count by MOS and Site

	Site					
MOS	FT Hood	FT Riley	FT Lewis	FT Carson	Korea	MOS Totals
11B	0	33	22	14	38	107
19K	0	47	0	11	39	97
25U	3	6	3	0	10	22
63B	40	7	12	16	27	102
68W	25	20	9	13	29	96
Site Totals	68	113	46	54	143	424

Note. Numbers are based on Soldiers meeting our TIS criteria who had a completed Background Information Form.

Data Collection Sessions

At each site, data were collected on Soldiers in two sessions. All sessions began with a project briefing and review of a Privacy Act statement. Participants completed a Background Information Form that collected basic background information, such as MOS, race, ethnicity, and gender. Soldiers participated in one session, in which they completed the predictor and criterion measures and provided performance ratings on a set of peers. Supervisors of participating Soldiers completed the second session, providing performance ratings on Soldiers and completing job-side versions of several of the experimental predictor measures.

Soldier Sessions

At each site, there were generally two groups of Soldiers tested per day, one group in the morning and a second group in the afternoon. Each Soldier session lasted 4 hours, during which time participating Soldiers (a) completed a Background Information Form and Supervisor and Rater Identification Sheet during in-processing, (b) completed the predictor and criterion

measures, and (c) provided ratings on peers participating in the CV data collection. Table 2.2 shows the Soldier session schedule.

Table 2.2. Soldier Session Schedule

In-Processing with Soldier Background Information Form
– Sign-in Sheet (paper)
– Supervisor and Peer Identification Sheet (paper)
– Briefing and Soldier Background Information Form with Privacy Act Statement
MOS-Specific Job Knowledge Test (JKT)
Army Life Questionnaire (ALQ)
Work Preferences Assessment (WPA)
Work Suitability Inventory (WSI)
Work Values Inventory (WVI)
Rational Biodata Inventory (RBI)
Predictor Situational Judgment Test (PSJT)
Job Analysis-Inspired Test (JAIT)[10]
Peer Performance Rating Scales (PRS)

Note. Measures are presented in the order in which they were administered.

Peer raters were identified from the Supervisor and Peer Identification Sheet that participating Soldiers completed during in-processing. Soldiers identified up to four peers who could rate their performance, as well as four peers whose performance they could rate. Peer nominees had to have known participating Soldiers for at least one month and to have been themselves participating in the data collection to be eligible to provide performance ratings. Peer raters were matched to eligible peers using a custom-made program that maximized the number of raters per ratee without requiring a Soldier to rate more than four peers. Prior to providing ratings, Soldiers completed a brief training protocol that included (a) familiarization with the performance dimensions and their anchored rating scales, (b) a description of common rating errors and recommendations on how to avoid them, and (c) an emphasis on the importance of using the scale definitions and anchors to make the ratings.

Supervisor Sessions

Supervisors participated in a 2- to 3-hour session. The supervisor session schedule is summarized in Table 2.3. In each session, supervisors (a) received a project briefing and completed a Background Information Form during in-processing, (b) completed environment-side versions of several of the experimental predictor measures (the JCI, MDI, and WRI), and (c) provided performance ratings on Soldiers participating in the CV data collection.

[10] The Army Class JAITs were expanded and refined versions of the PerformM21 JAITs. The JAITs were administered in the Army Class data collections but were not part of the project. Accordingly, this measure was not included in our analyses.

Table 2.3. Supervisor Session Schedule

In-Processing with Supervisor Background Information Form
Environment-Side Measures
Job Characteristics Inventory (JCI)
MOS Description Inventory (MDI)
Work Requirements Inventory (WRI)
Soldier Performance Rating Scales (PRS)

Note. Measures are listed in the order in which they were administered.

A supervisor was eligible to provide performance ratings if he or she had known one or more participating Soldiers for at least one month. Soldiers identified up to two supervisors who could rate their performance when completing the Supervisor and Peer Rater Identification Sheet. Prior to the performance ratings, supervisors received the same training Soldiers had been administered for the peer ratings. Because it was critically important to obtain a supervisor rating for every Soldier tested, we kept records during each data collection on which Soldiers needed supervisor ratings and coordinated with the site POC to obtain those ratings.

Staffing and Training

HumRRO and ARI personnel served as test administrators. A Test Administration Manual was developed for use in administering the Soldier and supervisor sessions. The manual included information on the timing and order of administration of measures, instructions for preparing packets of measures to be completed by participants, instructions for setting up the computers and rooms for administering the measures, and procedures for documenting data and quality control. This manual was updated during the course of the data collection period to reflect lessons learned, as needed.

All data collection staff participated in training sessions prior to collecting data. Training included information about the instruments to be administered (including familiarization with the delivery software), administration protocols, data documentation procedures, and materials/data handling procedures.

Database Construction

Constructing the database for use in the CV analyses consisted of the following steps:

1. Processing the data.
2. Securing and merging in archival data from Army databases.
3. Cleaning the data.
4. Computing the psychometric properties and scale scores for the predictor and criterion measures.

Data Processing and Quality Control

In constructing the database to be used for all analyses, we took a number of steps to make sure that the data were of the highest possible quality. Hard copy data (primarily the Background Information Forms) were checked prior to electronic scanning to ensure that all Soldier responses were recorded by the scanner.[11] The population of Soldiers who completed each measure was electronically compared to the roster of Soldiers compiled in the field and inconsistencies in population membership were resolved. The logical consistency between records in a dataset and between variables within a dataset was investigated and corrections and edits were made as needed. Information from the Test Session Logs was culled to identify cases requiring a review and verification of their data. In the case of computer-administered measures, data structures were modified as needed to make them more amenable for analysis.

Securing and Merging in Archival Data

Data collected in the field were merged with selected variables (e.g., ASVAB subtest scores) extracted from Army databases, specifically the Enlisted Master File (EMF) and the Military Entrance Processing Command's (MEPCOM) Integrated Resource System (MIRS). Data were retrieved from the Army databases by matching the Social Security Numbers (SSNs) of Soldiers participating in the Army Class CV with Soldier SSNs in the Army databases.

Data Cleaning

After the data were processed and prepared by the database manager, system-wide data cleaning was conducted to identify Soldiers that did not meet TIS requirements and other cross-instrument data screens. Soldiers that did not meet these screens were excluded from the sample. Instrument-specific data cleaning was also conducted to identify Soldiers and supervisors with questionable data that should be dropped (e.g., pattern responding). The cleaning of instrument-specific data followed the same rules and protocols implemented in previous ARI research with regard to treatment of missing data and deletion of Soldiers' data (e.g., Soldiers' data were excluded when they were missing more than 10% of the data for a scale or instrument) (Knapp & Tremble, 2007).

Computing the Psychometric Properties and Scale Scores for the Predictor Measures

The primary objective of this step was to refine (as needed) predictor scales and to compute the scale scores needed for the incremental validity and classification analyses. This process was fairly straightforward. For each instrument, we conducted basic psychometric analyses to assess the quality of individual items and scales. We computed reliability estimates (internal consistency) and scale intercorrelations, as well as scale means and standard deviations. The psychometric properties of the predictor measures are reported in Appendix A.

[11] Throughout this process, hard copy materials, particularly those containing Soldier personal identifiers, were stored in a locked and secure room. Electronic data were stored on a password-protected computer.

Computing the Psychometric Properties and Scale Scores for the Criterion Measures

As with the predictors, we applied comparable analysis procedures to refine and compute scale scores for the MOS-specific JKTs, performance rating scales (PRS), and the ALQ. For each instrument, we computed reliability estimates and scale intercorrelations (where applicable), as well as scale means and standard deviations. For the JKTs, we computed item statistics (e.g., frequencies, item-total correlations) and examined these to determine if there were poorly performing items that should be dropped when computing a total score. The psychometric properties of the criterion measures are reported in Appendix B.

Sample

Table 2.4 shows the CV sample sizes by subgroup and MOS. To increase the sample sizes available for the CV analyses, we combined Army Class CV Soldier data with data on 11B (n = 172) and 25U Soldiers (n = 54) previously collected in the Select21 CV (Knapp & Tremble, 2007).[12] The final CV sample consisted of 635 Soldiers, with the sample sizes by MOS ranging from 76 (25U) to 279 (11B). About 96% of the total sample was male and 4% were female. Seventy-seven percent of the total sample was identified as White, 13% as Black, and 10% as some other race. Approximately 23% of the total sample was Hispanic. In general, these figures are comparable to those for the Active Army population, given the composition of MOS constituting the CV sample.

Table 2.4. CV Sample Sizes by Subgroup and MOS (includes Select21 CV Soldiers)

	MOS					Subgroup Totals	
Subgroup	11B	19K	25U	63B	68W	*n*	*%*
Gender							
Male	279	92	67	93	76	607	95.7
Female	0	0	8	2	17	27	4.3
Race							
White	216	70	39	66	71	462	77.0
Black	24	10	26	11	7	78	13.0
Other	25	8	8	7	12	60	10.0
Ethnicity							
White Non-Hispanic	188	67	34	56	64	409	77.5
Hispanic	51	14	11	25	18	119	22.5
MOS Totals	279	92	76	95	93	635	

Notes. Due to missing demographic information, the numbers reported by subgroup will not add up to the totals reported under "MOS Totals." The numbers reported are post system-wide data cleaning and thus exclude Soldiers that did not meet time-in-service (TIS) criteria or other cross-instrument data screens. The sample sizes for individual predictor and criterion measures varies across measures owing to missing data.

[12] Prior to combining data from the Army Class CV and Select21 CV samples, we compared the two samples and generally found no significant, consistent pattern of differences in scores on the predictor or criterion measures, as reflected in the basic descriptives (e.g., means, standard deviations) and other psychometric properties (e.g., internal consistency reliability estimates) observed for these measures.

SECTION 3: ANALYSIS APPROACH

As discussed, the purpose of the CV research was to answer two questions:

- Which experimental predictor measures have the potential to enhance the selection of new recruits into the Army over the existing ASVAB?

- Which experimental predictor measures have the potential to enhance the classification of new recruits into entry-level jobs (or MOS) over the existing ASVAB?

In answering these questions, the primary goal was to identify which experimental predictor measures would maximize outcomes valued by the Army, specifically the performance and retention of first-term enlisted Soldiers. In the next couple of sections, we summarize the analysis approach we used to address each question.

Approach for Estimating the Incremental Validity of CV Predictors

To address the first question, we estimated the incremental validity of the CV predictor measures over two baseline predictors currently in use by, or potentially available to, the Army to select recruits, specifically the AFQT and the full ASVAB (excluding AO). Incremental validity is commonly indexed by estimating the increment in the multiple correlation (ΔR) when a new, alternative predictor(s) is added over and above a baseline predictor(s) to a regression model predicting a valued outcome (e.g., performance, retention). All other factors being equal, the greater the increment in the multiple correlation (ΔR) from adding the new predictor measure(s), the greater their potential to enhance the organization's selection decisions. Consistent with the Army's personnel goals, we estimated the incremental validity of the CV predictor measures over the AFQT and the existing operational ASVAB subtests (i.e., excluding AO) for predicting both performance and retention-related criteria.[13]

To estimate the incremental validity of the CV predictor measures, we fitted a series of hierarchical regression models, regressing each of the criterion measures onto Soldiers' scores on the AFQT or the existing ASVAB subtests in the first step, followed by the scale scores constituting a selected CV predictor in the second step. For each predictor-criterion combination, we computed two sets of incremental validity estimates: (a) the first reflecting the observed data (i.e., uncorrected) and (b) the second reflecting corrections for range restriction on the AFQT and adjusted for shrinkage using Rozeboom's (1978) formula. On the second set of estimates, we made corrections for criterion unreliability for the retention-related criteria only, and not the

[13] We included a series of analyses using all eight operational ASVAB subtests so that the experimental predictor measures could be evaluated against a baseline that reflected the optimally best the Army could do selecting Soldiers using existing predictor measures. That is, regression model(s) that included the full ASVAB permits the estimation of the maximum predictive potential of the existing ASVAB, since subtests beyond those currently constituting the AFQT are likely to contribute to the prediction of criteria valued by the Army and administered in the current research.

performance-related criteria.[14] In estimating these models, we followed the same procedure used in analyzing data from the Select21 CV (Knapp & Tremble, 2007). This procedure was as follows:

1. Estimate the observed (uncorrected) multiple correlation *(R)* for the AFQT or the existing eight operational ASVAB subtests (i.e., excluding AO) by regressing Soldiers' scores on the selected criterion on AFQT or ASVAB subtests scores.

2. Estimate the multiple *R* for AFQT (or the existing eight operational ASVAB subtests) and the new CV predictor by regressing Soldiers' scores on the selected criterion on AFQT (or ASVAB subtest) scores and those for the new predictor (i.e., AFQT/ASVAB + CV Predictor).

3. Calculate the uncorrected incremental validity estimates (over AFQT or the existing eight operational ASVAB subtests) by subtracting the uncorrected (multiple) correlation obtained from Step 1 (the AFQT or ASVAB only) from the uncorrected multiple *R* (AFQT or ASVAB + New CV Predictor) obtained from Step 2.

Calculating the corrected incremental validity estimates involved a few additional steps:

1. Using the observed (uncorrected) correlations among the new predictor, AFQT (or ASVAB subtests), and the selected criterion previously estimated, correct the correlations between the predictors and the retention-related criteria (i.e., ALQ) only for criterion unreliability. Re-estimate multiple *R*s using the correlations corrected for criterion unreliability as input, where applicable.

2. Correct the resulting *R*s from Step 1 for multivariate range restriction on the ASVAB using Lawley's (1943) formula and then adjust for shrinkage using Rozeboom's (1978) Formula 8. ASVAB data from FY 2004 Army accessions served as the reference population for the multivariate range restriction corrections.[15]

3. Calculate the corrected incremental validity estimates for the CV predictor by subtracting the *R* obtained from entering in the AFQT (or the ASVAB subtests) only from the multiple *R* obtained from the full model (i.e., the AFQT or ASVAB + New CV Predictor).

[14] Spearman's (1904) correction for attenuation formula makes assumptions (e.g., scores on a predictor measure are uncorrelated with error in scores on the criterion measure) that can lead to serious overestimates of predictive validity, specifically when applied to performance ratings. Accordingly, we did not correct estimates for the performance-related criteria for criterion unreliability to ensure that our estimates did not overstate the predictive and classification potential of the predictor measures.

[15] Estimates were corrected to the Army accession population and not the applicant population because the AFQT, or alternatively an expanded composite that includes additional ASVAB subtests, would continue to be used the first or primary hurdle for selecting applicants into the Army, even if one or more of the experimental predictors were to be implemented.

Only the full scores for the CV predictor measures were used when estimating these models. None of the CV predictor scores used during estimation were optimally weighted or empirically keyed to a criterion.

Approach for Estimating the Classification Potential of CV Predictors

To address the second question, we conducted a simulation to analyze the potential gains from classifying Soldiers to the sample of five MOS using the CV predictor measures over the existing ASVAB subtests, as measured by two commonly used indices of classification potential: (a) Horst's (1954, 1955) index of differential validity (H_d) and (b) mean predicted criterion score (MPCS). H_d provides an index of the ability of a predictor measure(s) to differentiate among the predicted criterion scores across a sample of jobs. The greater the H_d value, the larger the cross-job differences in the predicted criterion scores. Conceptually, H_d provides an indication of how well the predictor measure(s) discriminate how effectively individuals will perform in or be satisfied in a sample of jobs. Analytically, H_d represents the average standardized mean difference between all possible pairs of (predicted) criterion scores for a sample of jobs. Conversely, the mean predicted criterion score (MPCS) reflects the average predicted criterion score for individuals classified into a sample of jobs using a predictor measure(s). The greater the MPCS, the higher individuals are predicted to perform or be satisfied, on average, when classified into a sample of jobs using the selected predictor measure(s). Although the two indices are related (i.e., larger H_d values tend to be associated with higher MPCS values), each captures unique information about the classification potential of a predictor measure(s). Whereas H_d provides information on cross-job differences (or variability) in predicted criterion scores, the MPCS supplies information on the level (average) at which individuals are predicted to score on a valued outcome (e.g., performance, retention) resulting from the use of a predictor measure(s) to classify individuals into jobs.

At present, there are no standards or conventions for interpreting the magnitude of or gain in H_d relative to some baseline. With respect to MPCS, there is some evidence that increments in MPCS as low as .10 carry significant and practical operational gains (Nord & Schmitz, 1991). Past research using a similar simulation procedure examining the Project A experimental predictor measures found MPCS ranging from the mid to high-.20s for the existing ASVAB and ranging from the low to mid-.30s when combined with selected experimental predictors using a performance-based criterion (Rosse, J. P. Campbell, & Peterson, 2001; Scholarios, Johnson, & Zeidner, 1994).[16]

Like the incremental validity analyses, we estimated the increment in H_d and MPCS resulting from using the CV predictor measures over the existing ASVAB to classify Soldiers into our sample of five MOS. Consistent with the Army's personnel management objectives, we ran these analyses using both performance and retention-related criteria. Additionally, it was reasonable to expect that the results could vary across criteria (i.e., the CV predictor measures

[16] Readers are reminded that the estimates reported here are based on optimal conditions and do not reflect the *actual* gain in classification that would be achieved, once constraints and other features of the Army's operational classification system have been considered.

showing the greatest increment over the existing ASVAB could differ depending on whether one is maximizing performance or retention-related criteria when classifying Soldiers to MOS).

Our simulation followed a modified version of the procedure used by Rosse, J. P. Campbell, and Peterson (2001) to estimate and analyze the classification potential of the Project A predictor measures. In brief, our procedure was as follows:

1. Estimate the observed (uncorrected) covariance matrix for each MOS.

2. Correct the observed predictor-criterion covariances and criterion variances for the retention-related criteria (i.e., the ALQ) from Step 1 for criterion unreliability.

3. Correct the predictor-criterion covariances and predictor covariances from Steps 1 and 2 for multivariate range restriction on the ASVAB using data on FY 2004 Army accessions as the reference population.

4. Using the corrected covariance matrices from Step 3, simulate predictor and criterion scores for multiple validation samples (k = 40) whose sample sizes approximated those in the current research.

5. Using the predictor and criterion scores simulated for each replication in Step 4, compute two indices of classification potential: (a) (H_d) and (b) MPCS (DeCorte, 2000).

6. Within each replication, cross-validate estimates of H_d and MPCS against 10 secondary (or additional) simulated samples to obtain estimates of these indices adjusted for shrinkage.

See Appendix C for additional technical details.

SECTION 4: RESULTS

Incremental Validity of the CV Predictor Measures

Tables 4.1 through 4.6 show uncorrected and corrected incremental validity estimates for the CV predictor measures by criterion type for the full CV sample. Based on theory and recent research examining the CV predictor measures (e.g., J.P. Campbell, McCloy, Sager, & Oppler, 1993; Knapp & Tremble, 2007), we expected the incremental validity of the CV predictor measures to vary by criterion type. For this reason, we first present the results based on the performance-related criteria (MOS-specific JKT, performance ratings), followed by those based on the retention-related criteria (ALQ). In presenting these results, we focus primarily on corrected incremental validity estimates, as the number of scores entering into the model varied by predictor owing to the number of scales constituting each measure.[17] To enable fair comparisons to be made among the predictors, we used Rozeboom's (1978) shrinkage formula to account for the fact that the estimated validity of predictor measures contributing more scores to a prediction model would be expected to evidence greater shrinkage upon cross-validation than those with fewer scores. To facilitate interpretation, estimates for each predictor are presented in descending order according to the magnitude of their corrected incremental validity estimate (*R*) for a selected criterion.

Predicting Performance-Related Criteria

Table 4.1 reports the incremental validity estimates for the CV predictor measures over the AFQT for predicting performance-related criteria, while Table 4.2 shows the incremental validity estimates over the existing operational ASVAB subtests.[18] In general, the predictors evidencing the greatest incremental validity over the AFQT likewise demonstrated the greatest incremental validity over the full ASVAB when predicting the same performance criterion.[19] Similarly, the relative ordering of the predictors based on their incremental validity was the same across the AFQT and the ASVAB for a selected criterion. Accordingly, in summarizing the results we consider the AFQT and the ASVAB simultaneously, instead of treating them separately.

Examination of Tables 4.1 and 4.2 evidences the following:

The CV predictor measures exhibited limited potential to increment prediction, on average, over the AFQT and the existing ASVAB for more cognitively laden or knowledge-based performance criteria (i.e., criteria assessing what a Soldier knows). The predictive validity of the AFQT and the existing ASVAB for predicting performance on an MOS-specific JKT was high, with (corrected) *R*s of .56 and .64, respectively. Accordingly, the experimental CV

[17] One score was entered for the PSJT and AO, respectively; 9 scores were entered for the RBI; 28 scores for the WVI, and 14 facet-level scores for the WPA; and 15 scores for the WSI. Due to the completely ipsative nature of the WSI full scores, the sum of all 16 WSI full scores for a Soldier is a constant across Soldiers. Because of this, one WSI full score was omitted during estimation. The results of our preliminary analyses were generally the same regardless of which of the 16 full scores was dropped, so one was dropped at random.

[18] See Table 1.1 (page 5) for a summary of the performance-related criterion measures administered in the Army Class CV. For a more detailed description of the criterion measures, see pages 4-9.

[19] Throughout the remainder of this section, any mention of the "full ASVAB" or "existing ASVAB" refer to models that included all eight operational subtests that currently constitute the ASVAB.

Table 4.1. Incremental Validity Estimates for CV Predictor Measures over the AFQT for Predicting Performance-Related Criteria

		Uncorrected			Corrected		
Criterion/Predictor	*n*	AFQT Only	AFQT + Predictor	Δ*R*	AFQT Only	AFQT + Predictor	Δ*R*
MOS-Specific Job Knowledge Test (JKT)							
WPA [14]	541	**.43**	**.50**	**.07**	.56	.61	.05
WSI [15]	486	**.43**	**.45**	.02	.56	.60	.04
RBI [9]	343	**.43**	**.44**	.02	.56	.59	.03
WVI [28]	514	**.43**	**.50**	**.07**	.56	.57	.01
PSJT [1]	438	**.43**	**.43**	.00	.56	.56	.00
MOS-Specific Technical Performance Rating							
WVI [28]	487	**.12**	**.39**	**.27**	.10	.40	.30
RBI [9]	308	**.12**	**.35**	**.23**	.10	.37	.27
WPA [14]	520	**.12**	**.27**	**.15**	.10	.36	.26
WSI [15]	464	**.12**	**.27**	**.15**	.10	.27	.17
PSJT [1]	421	**.12**	**.12**	.00	.10	.11	.01
Exhibits Effort and Professionalism Rating							
WPA [14]	311	**.15**	**.32**	**.17**	.03	.38	.35
WSI [15]	274	**.15**	**.31**	.16	.03	.35	.32
WVI [28]	282	**.15**	**.46**	**.31**	.03	.33	.30
RBI [9]	305	**.15**	**.30**	**.15**	.03	.28	.25
PSJT [1]	234	**.15**	**.17**	.02	.03	.04	.01
Works Effectively with Others Rating							
WPA [14]	309	.10	.23	.13	.03	.33	.29
RBI [9]	304	.10	.22	.13	.03	.25	.22
WVI [28]	280	.10	**.39**	.29	.03	.23	.19
WSI [15]	272	.10	.22	.12	.03	.21	.18
PSJT [1]	234	.10	.12	.02	.03	.04	.00
Physical Fitness Rating							
RBI [9]	308	.06	**.43**	**.37**	.09	.43	.34
WVI [28]	486	.06	**.39**	**.33**	.09	.35	.25
WPA [14]	519	.06	**.31**	**.25**	.09	.29	.20
WSI [15]	463	.06	**.24**	**.18**	.09	.28	.19
PSJT [1]	420	.06	.06	.00	.09	.10	.00

Note. AFQT Only = Absolute correlation between the AFQT and the criterion. AFQT + Predictor = Multiple correlations (*R*) based on a regression model including the AFQT and all scores for a given predictor. Bracketed numbers are the number of scores included for each predictor. The Δ*R* column indicates the increment in estimated validity (change in *R*) obtained from adding the predictors to the AFQT. Values in the first set of columns (Uncorrected) are based on observed data. Values in the second set of columns (Corrected) are based on correlation matrices corrected for range restriction and *R*s that have been adjusted for shrinkage using Rozeboom's (1978) formula. Predictors are sorted in descending order of the magnitude of their corrected increment in validity over the AFQT (Corrected Δ*R*). Bolded correlations in the AFQT Only column are statistically significant ($p < .05$). Bolded values in the AFQT + Predictor column indicate that the Multiple *R* for the model with the AFQT and predictor was statistically significant ($p < .05$). Bolded values in the Δ*R* column indicate that the increment in validity was statistically significant ($p < .05$).

Table 4.2. Incremental Validity Estimates for CV Predictor Measures over the ASVAB for Predicting Performance-Related Criteria

		Uncorrected			Corrected		
Criterion/Predictor	*n*	ASVAB Only	ASVAB + Predictor	Δ*R*	ASVAB Only	ASVAB + Predictor	Δ*R*
MOS-Specific Job Knowledge Test (JKT)							
WPA [14]	528	**.55**	**.57**	.02	.64	.67	.02
WSI [15]	486	**.55**	**.56**	.01	.64	.66	.02
RBI [9]	343	**.55**	**.55**	.00	.64	.67	.02
WVI [28]	514	**.55**	**.58**	.03	.64	.65	.01
PSJT [1]	438	**.55**	**.55**	.00	.64	.64	.00
AO [1]	460	**.55**	**.55**	.00	.64	.64	.00
MOS-Specific Technical Performance Rating							
WVI [28]	487	**.24**	**.43**	**.19**	.27	.44	.18
RBI [9]	308	**.24**	**.38**	**.14**	.27	.43	.16
WPA [14]	520	**.24**	**.33**	**.09**	.27	.42	.15
WSI [15]	464	**.24**	**.32**	.08	.27	.34	.07
PSJT [1]	421	**.24**	**.24**	.00	.27	.27	.00
AO [1]	453	**.24**	**.24**	.00	.27	.27	.00
Exhibits Effort and Professionalism Rating							
WPA [14]	309	**.26**	**.38**	**.12**	.28	.45	.17
WSI [15]	274	**.26**	**.36**	.10	.28	.45	.17
WVI [28]	282	**.26**	**.49**	**.23**	.28	.40	.12
RBI [9]	305	**.26**	**.35**	.09	.28	.37	.09
PSJT [1]	234	**.26**	**.27**	.01	.28	.28	.00
AO [1]	291	**.26**	**.26**	.00	.28	.28	.00
Works Effectively with Others Rating							
WPA [14]	307	.18	.26	.08	.23	.39	.16
RBI [9]	304	.18	.26	.08	.23	.33	.10
WVI [28]	280	.18	.40	.22	.23	.30	.07
WSI [15]	272	.18	.25	.07	.23	.30	.07
PSJT [1]	234	.18	.19	.01	.23	.23	.00
AO [1]	289	.18	.18	.00	.23	.23	.00
Physical Fitness Rating							
RBI [9]	308	.19	**.45**	**.26**	.18	.44	.26
WVI [28]	486	**.19**	**.41**	**.22**	.18	.37	.19
WPA [14]	519	**.19**	**.35**	**.16**	.18	.32	.14
WSI [15]	463	**.19**	**.29**	.10	.18	.31	.13
PSJT [1]	420	**.19**	.19	.00	.18	.18	.00
AO [1]	452	**.19**	**.19**	.00	.18	.18	.00

Note. ASVAB Only = Absolute correlation between the existing ASVAB and the criterion. ASVAB + Predictor = Multiple correlations (*R*) based on a regression model including the ASVAB and all scores for a given predictor. Bracketed numbers are the number of scores included for each predictor. The Δ*R* column indicates the increment in estimated validity (change in *R*) obtained from adding the predictors to the ASVAB. Values in the first set of columns (Uncorrected) are based on observed data. Values in the second set of columns (Corrected) are based on correlation matrices corrected for range restriction and *R*s that have been adjusted for shrinkage using Rozeboom's (1978) formula. Predictors are sorted in descending order of the magnitude of their corrected increment in validity over the ASVAB (Corrected Δ*R*). Bolded correlations in the ASVAB Only column are statistically significant ($p < .05$). Bolded values in the ASVAB + Predictor column indicate that the Multiple *R* for the model with the ASVAB and predictor was statistically significant ($p < .05$). Bolded values in the Δ*R* column indicate that the increment in validity was statistically significant ($p < .05$).

predictor measures demonstrated low levels of incremental validity (ΔRs = .00 to .05 over the AFQT; ΔRs = .00 to .02 over the existing ASVAB). Nevertheless, all of the experimental predictor measures, except for the PSJT, evidenced potentially non-trivial increments in the prediction of MOS-specific JKT performance over and above the existing ASVAB. For example, the WPA exhibited an 8.9% gain over the AFQT (ΔR = .05) and a 3.1% gain over the ASVAB (ΔR = .02). Similarly, the WSI showed gains over the AFQT and the ASVAB of 7.1% (ΔR = .04) and 3.1% (ΔR = .02), respectively. This pattern of results is consistent with those from Select21 and other past research, which has shown that measures of general or specific cognitive abilities, such as the existing ASVAB, are generally stronger predictors of "can do" performance criteria than measures of non-cognitive attributes (e.g., interest, temperament) (J. P. Campbell & Knapp, 2001; Knapp & Tremble, 2007; McHenry, Hough, Toquam, Hanson, & Ashworth, 1990).

The CV predictor measures showed substantial levels of incremental validity over the AFQT and ASVAB for predicting criteria assessing on-the-job performance (i.e., what a Soldier does), both technical and non-technical. With the exception of the PSJT and AO, the other CV predictor measures generally exhibited moderate to high levels of incremental validity over the AFQT and the existing ASVAB in predicting Soldiers' performance ratings, including ratings of MOS-specific technical performance. Although the predictive validity estimates for the existing ASVAB, and to a lesser degree the AFQT, associated with the performance ratings were significant, they were one-half to two-thirds less than those associated with the MOS-specific JKTs. As with the MOS-specific JKT, this pattern of results is consistent with those from Select21 (Knapp & Tremble, 2007). Measures of non-cognitive attributes, like those administered in the CV, emerged as stronger predictors of performance criteria having a "will do" component (e.g., performance ratings) than measures of general or specific cognitive abilities.

With regard to MOS-specific technical performance ratings, the WVI, RBI, WPA, and to a lesser extent the WSI, showed significant increments in prediction over and above the AFQT and the existing ASVAB. All the CV predictor measures, except for the PSJT and AO, significantly added to the prediction of Soldiers' MOS-specific technical performance over the AFQT and the ASVAB. As reported in Tables 4.1 and 4.2, the incremental validity estimates for the CV predictor measures, excluding the PSJT and AO, ranged from .17 to .30 over the AFQT and .07 to .18 over the existing ASVAB. Of these, the WVI evidenced the greatest incremental validity, showing predictive gains of 300% over the AFQT (ΔR = .30) and 66.7% over the ASVAB (ΔR = .18).

As with the MOS-specific technical performance ratings, all the CV predictor measures, except for PSJT and AO, showed significant increments over the AFQT and the existing ASVAB in the prediction of the non-technical performance ratings (e.g., Exhibits Effort and Professionalism, Works Effectively with Others, and Physical Fitness). All the CV predictor measures, except for PSJT and AO, evidenced significant increments over the AFQT and the ASVAB in predicting Soldiers' ratings on Effort and Professionalism, Physical Fitness, and to a lesser extent, Working Effectively with Others. For Effort and Professionalism, the incremental validity estimates for the CV predictor measures, excluding the PSJT and AO, ranged from .25 to .35 over the AFQT and .09 to .17 over the ASVAB. For Works Effectively with Others, the incremental validity estimates, again excluding the PSJT and AO, ranged from .18 to .29 over the AFQT and .07 to .16 over the existing ASVAB. For Physical Fitness, the incremental validity estimates, excluding the PSJT and AO, ranged from .19 to .34 over the AFQT and .13 to .26 over the ASVAB. The CV predictor

measure demonstrating the greatest potential to increment the AFQT and the ASVAB in predicting Soldiers' ratings on Effort and Professionalism and Works Effectively with Others was the WPA. On Physical Fitness, the RBI showed the greatest predictive gains (ΔR = .34 over the AFQT and a ΔR = .26 over the ASVAB).

Predicting Retention-Related Criteria

Tables 4.3 and 4.4 report the incremental validity estimates for the CV predictor measures over the AFQT and the existing ASVAB in predicting Army-wide retention-related criteria (Satisfaction with the Army, Perceived Army Fit, Attrition Cognitions, and Career Intentions). Tables 4.5 and 4.6 show the incremental validity estimates for the CV predictor measures in predicting MOS-specific retention-related criteria (Satisfaction with MOS, Perceived MOS Fit, Perceived Competence, and MOS Exceeds Expectations).[20] As was the case with the performance criteria, the pattern of results for a selected retention-related criterion were similar across the AFQT and the existing ASVAB – the predictors evidencing the greatest gains in incremental validity over the AFQT, also demonstrated the greatest predictive gains over the ASVAB when predicting the same retention-related criterion. Similarly, the relative ordering of the predictors based on their incremental validity was the same across the AFQT and the ASVAB for a selected retention-related criterion. Accordingly, in summarizing the results we consider estimates for both the AFQT and the ASVAB, instead of treating (or interpreting) them separately.

In regards to Army-wide retention-related criteria, examination of Tables 4.3 and 4.4 evidences the following:

In contrast to the performance-related criteria, all the experimental CV predictor measures significantly incremented the validity of the AFQT and the existing ASVAB in predicting Soldiers' attitudes towards and propensity to stay in the Army. Only AO did not show a significant increment over the ASVAB in predicting Army-wide retention criteria. However, this finding is to be expected as AO is a measure of cognitive aptitude and past research has generally not found such measures to be strongly predictive of employee attitudes towards an organization. The incremental validity estimates for the CV predictor measures, excluding AO, ranged from .13 to .70 over the AFQT and .08 to .59 over the existing ASVAB. This pattern of findings is consistent with those from the Select21 CV (Knapp & Tremble, 2007).

Among the CV predictor measures, the RBI consistently emerged as the predictor evidencing the most potential to increment the AFQT or the existing ASVAB in predicting Army-wide retention criteria. The RBI evidenced (a) an 800% gain over the AFQT (ΔR = .56) and a 482% gain over the ASVAB (ΔR = .53) for predicting Soldiers' Satisfaction with the Army; (b) a 1000+% gain over the AFQT (ΔR = .70) and a 393% gain over the ASVAB (ΔR = .59) for predicting Soldiers' Perceived Fit with the Army; (c) a 700% gain over the AFQT (ΔR = .56) and a 237% gain over the ASVAB (ΔR = .45) for predicting Soldiers' Attrition Cognitions; and (d) a 1300% gain over the AFQT (ΔR = .52) and a 480% gain over the ASVAB (ΔR = .48) for

[20] All retention-related criteria were obtained from the ALQ. See Table 1.2 (page 9) for descriptions of each ALQ scale.

Table 4.3. Incremental Validity Estimates for CV Predictor Measures over the AFQT for Predicting Army-Wide Retention-Related Criteria

		Uncorrected			Corrected		
Criterion/Predictor	*n*	AFQT Only	AFQT + Predictor	Δ*R*	AFQT Only	AFQT + Predictor	Δ*R*
Satisfaction with the Army							
RBI [9]	368	.07	**.59**	**.52**	.07	.63	.56
WVI [28]	541	.07	**.46**	**.39**	.07	.52	.45
WPA [14]	580	.07	**.35**	**.28**	.07	.37	.30
WSI [15]	515	.07	**.34**	**.27**	.07	.41	.35
PSJT [1]	465	.07	**.21**	**.14**	.07	.25	.18
Perceived Army Fit							
RBI [9]	368	.01	**.69**	**.68**	.04	.74	.70
WVI [28]	541	.01	**.47**	**.46**	.04	.54	.50
WSI [15]	515	.01	**.36**	**.35**	.04	.43	.39
WPA [14]	580	.01	**.42**	**.41**	.04	.38	.34
PSJT [1]	465	.01	**.17**	**.16**	.04	.20	.16
Attrition Cognitions							
RBI [9]	368	.04	**.55**	**.51**	.08	.63	.56
WVI [28]	541	.04	**.41**	**.37**	.08	.46	.39
WPA [14]	580	.04	**.36**	**.32**	.08	.38	.31
WSI [15]	515	.04	**.33**	**.29**	.08	.38	.30
PSJT [1]	465	.04	**.16**	**.12**	.08	.21	.13
Career Intentions							
RBI [9]	368	.05	**.56**	**.51**	.04	.57	.52
WVI [28]	541	.05	**.42**	**.37**	.04	.48	.44
WPA [14]	580	.05	**.33**	**.28**	.04	.27	.22
WSI [15]	515	.05	**.28**	**.23**	.04	.26	.22
PSJT [1]	465	.05	**.16**	**.11**	.04	.17	.13

Note. AFQT Only = Absolute correlation between the AFQT and the criterion. AFQT + Predictor = Multiple correlations (*R*) based on a regression model including the AFQT and all scores for a given predictor. Bracketed numbers are the number of scores included for each predictor. The Δ*R* column indicates the increment in estimated validity (change in *R*) obtained from adding the predictors to the AFQT. Values in the first set of columns (Uncorrected) are based on observed data. Values in the second set of columns (Corrected) are based on correlation matrices corrected for range restriction and criterion unreliability, and *R*s that have been adjusted for shrinkage using Rozeboom's (1978) formula. Predictors are sorted in descending order of the magnitude of their corrected increment in validity over the AFQT (Corrected Δ*R*). Bolded correlations in the AFQT Only column are statistically significant ($p < .05$). Bolded values in the AFQT + Predictor column indicate that the Multiple *R* for the model with the AFQT and predictor was statistically significant ($p < .05$). Bolded values in the Δ*R* column indicate that the increment in validity was statistically significant ($p < .05$).

Table 4.4. Incremental Validity Estimates for CV Predictor Measures over the ASVAB for Predicting Army-Wide Retention-Related Criteria

		Uncorrected			Corrected		
Criterion/Predictor	*n*	ASVAB Only	ASVAB + Predictor	Δ*R*	ASVAB Only	ASVAB + Predictor	Δ*R*
Satisfaction with the Army							
RBI [9]	350	.11	**.59**	**.48**	.11	.64	.53
WVI [28]	541	.11	**.47**	**.36**	.11	.53	.42
WSI [15]	514	.11	**.35**	**.24**	.11	.42	.32
WPA [14]	566	.11	**.36**	**.25**	.11	.38	.27
PSJT [1]	458	.11	**.23**	**.12**	.11	.27	.16
AO [1]	494	.11	.11	.00	.11	.11	.00
Perceived Army Fit							
RBI [9]	350	.14	**.69**	**.55**	.15	.75	.59
WVI [28]	541	.14	**.49**	**.35**	.15	.56	.41
WSI [15]	514	.14	**.38**	**.24**	.15	.45	.30
WPA [14]	566	.14	**.44**	**.30**	.15	.41	.25
PSJT [1]	458	.14	**.23**	**.09**	.15	.26	.11
AO [1]	494	.14	.16	.01	.15	.16	.00
Attrition Cognitions							
RBI [9]	350	.12	**.55**	**.43**	.19	.64	.45
WVI [28]	541	.12	**.43**	**.31**	.19	.49	.30
WPA [14]	566	.12	**.37**	**.25**	.19	.41	.22
WSI [15]	514	.12	**.35**	**.23**	.19	.41	.22
PSJT [1]	458	.12	**.20**	**.08**	.19	.27	.08
AO [1]	494	.12	.14	.02	.19	.20	.01
Career Intentions							
RBI [9]	350	.07	**.56**	**.49**	.10	.58	.48
WVI [28]	541	.07	**.43**	**.36**	.10	.50	.40
WPA [14]	566	.07	**.33**	**.26**	.10	.28	.19
WSI [15]	514	.07	**.29**	**.22**	.10	.28	.19
PSJT [1]	458	.07	.17	**.10**	.10	.19	.09
AO [1]	494	.07	.07	.00	.10	.10	.00

Note. ASVAB Only = Absolute correlation between the existing ASVAB and the criterion. ASVAB + Predictor = Multiple correlations (*R*) based on a regression model including the ASVAB and all scores for a given predictor. Bracketed numbers are the number of scores included for each predictor. The Δ*R* column indicates the increment in estimated validity (change in *R*) obtained from adding the predictors to the ASVAB. Values in the first set of columns (Uncorrected) are based on observed data. Values in the second set of columns (Corrected) are based on correlation matrices corrected for range restriction and criterion unreliability, and *R*s that have been adjusted for shrinkage using Rozeboom's (1978) formula. Predictors are sorted in descending order of the magnitude of their corrected increment in validity over the AFQT (Corrected Δ*R*). Bolded correlations in the ASVAB Only column are statistically significant ($p < .05$). Bolded values in the ASVAB + Predictor column indicate that the Multiple *R* for the model with the AFQT and predictor was statistically significant ($p < .05$). Bolded values in the Δ*R* column indicate that the increment in validity was statistically significant ($p < .05$).

predicting Soldiers' career intentions. The relative rank ordering of the other CV predictors was consistent across these criteria, with the WVI exhibiting the next highest levels of incremental validity, followed by the WPA, the WSI, and the PSJT. The WVI, the WPA, and the WSI all evidenced substantial levels of incremental validity with estimates ranging from the low .20s to the mid-.40s. The inclusion of the Army Affective Commitment scale in these analyses could have artificially inflated the incremental validity estimates for the RBI due to similarity in the content measured by the scale and the Army-wide retention criteria. Consistent with the findings from Select21 (Knapp & Tremble, 2007), we found that the incremental validity of the RBI dropped appreciably when the Army Affective Commitment scale was excluded. Although the estimates were notably lower than those reported in Tables 4.3 and 4.4, the RBI still emerged as the predictor with the greatest potential to increment the existing ASVAB. The one exception was Career Intentions, where the WVI evidenced the greatest incremental validity relative to an RBI that excludes the Army Affective Commitment scale.[21]

In regards to MOS-specific retention-related criteria, examination of Tables 4.5 and 4.6 shows the following:

All the experimental CV predictor measures, except AO and to a lesser extent the PSJT, significantly incremented the validity of the AFQT and the existing ASVAB in predicting Soldiers' satisfaction with and attitudes towards their MOS. Consistent with the Army-wide retention-related criteria, the experimental CV predictor measures, excluding AO and PSJT, significantly added to the prediction of MOS-specific retention criteria over the existing ASVAB. The incremental validity estimates for the CV predictor measures, excluding the PSJT and AO, ranged from .20 to .52 over the AFQT and .13 to .37 over the existing ASVAB. In general, the level of incremental validity evidenced by the CV predictor measures was somewhat lower, on average, than that observed with the Army-wide retention criteria. Although relatively modest in magnitude, the predictive validity estimates for the existing ASVAB were non-trivial, ranging from .20 to .29. This finding likely reflects the fact that the existing ASVAB is working in classifying Soldiers to MOS that best match their KSAOs. Nevertheless, as the incremental validity estimates demonstrated, considerable room remains for enhancing the Soldier-job matching process. These results indicate that one or more of the CV predictor measures could greatly contribute to that enhancement.

[21] (Uncorrected) incremental validity estimates over the AFQT in predicting the Army-wide retention criteria for the RBI *minus* the Army Affective Commitment scale were as follows: *Satisfaction with the Army* (ΔR = .41, down from .52 with the Army Affective Commitment scale included); *Perceived Army Fit* (ΔR = .48, down from .68 with the Army Affective Commitment scale included); *Attrition Cognitions* (ΔR = .43, down from .51 with the Army Affective Commitment scale included); and *Career Intentions* (ΔR = .32, down from .51 with the Army Affective Commitment scale included). (Uncorrected) incremental validity estimates over the ASVAB for the RBI minus the Army Affective Commitment scale were as follows: *Satisfaction with the Army* (ΔR = .37, down from .48 with the Army Affective Commitment scale included); *Perceived Army Fit* (ΔR = .37, down from .55 with the Army Affective Commitment scale included); *Attrition Cognitions* (ΔR = .35, down from .43 with the Army Affective Commitment scale included); and *Career Intentions* (ΔR = .31, down from .49 with the Army Affective Commitment scale included).

Table 4.5. Incremental Validity Estimates for CV Predictor Measures over the AFQT for Predicting MOS-Specific Retention-Related Criteria

		Uncorrected			Corrected		
Criterion/Predictor	*n*	AFQT Only	AFQT + Predictor	Δ*R*	AFQT Only	AFQT + Predictor	Δ*R*
Satisfaction with MOS							
RBI [9]	368	**.23**	**.47**	**.25**	.23	.51	.28
WVI [28]	541	**.23**	**.43**	**.20**	.23	.45	.22
WPA [14]	580	**.23**	**.43**	**.20**	.23	.45	.22
WSI [15]	515	**.23**	**.41**	**.18**	.23	.42	.20
PSJT [1]	465	**.23**	**.25**	**.02**	.23	.25	.03
Perceived MOS Fit							
RBI [9]	366	.00	**.43**	**.43**	.09	.49	.40
WVI [28]	343	.00	**.45**	**.45**	.09	.47	.37
WSI [15]	330	.00	**.33**	**.33**	.09	.36	.27
WPA [14]	373	.00	**.35**	**.35**	.09	.32	.23
PSJT [1]	275	.00	.06	.06	.09	.11	.01
Perceived Competence							
RBI [9]	366	.05	**.53**	**.48**	.04	.56	.52
WPA [14]	373	.05	**.46**	**.41**	.04	.53	.48
WVI [28]	343	.05	**.49**	**.44**	.04	.41	.37
WSI [15]	330	.05	**.38**	**.33**	.04	.35	.31
PSJT [1]	275	.05	.08	.03	.04	.10	.05
MOS Exceeds Expectations							
RBI [9]	366	.09	**.50**	**.41**	.15	.58	.43
WVI [28]	343	.09	**.49**	**.40**	.15	.52	.37
WPA [14]	373	.09	**.38**	**.29**	.15	.40	.25
WSI [15]	330	.09	**.33**	**.24**	.15	.35	.20
PSJT [1]	275	.09	**.19**	**.10**	.15	.26	.11

Note. AFQT Only = Absolute correlation between the AFQT and the criterion. AFQT + Predictor = Multiple correlations (*R*) based on a regression model including the AFQT and all scores for a given predictor. Bracketed numbers are the number of scores included for each predictor. The Δ*R* column indicates the increment in estimated validity (change in *R*) obtained from adding the predictors to the AFQT. Values in the first set of columns (Uncorrected) are based on observed data. Values in the second set of columns (Corrected) are based on correlation matrices corrected for range restriction and criterion unreliability, and *R*s that have been adjusted for shrinkage using Rozeboom's (1978) formula. Predictors are sorted in descending order of the magnitude of their corrected increment in validity over the AFQT (Corrected Δ*R*). Bolded correlations in the AFQT Only column are statistically significant ($p < .05$). Bolded values in the AFQT + Predictor column indicate that the Multiple *R* for the model with the AFQT and predictor was statistically significant ($p < .05$). Bolded values in the Δ*R* column indicate that the increment in validity was statistically significant ($p < .05$).

Table 4.6. Incremental Validity Estimates for CV Predictor Measures over the ASVAB for Predicting MOS-Specific Retention-Related Criteria

		Uncorrected			Corrected		
Criterion/Predictor	*n*	ASVAB Only	ASVAB + Predictor	Δ*R*	ASVAB Only	ASVAB + Predictor	Δ*R*
Satisfaction with MOS							
RBI [9]	350	**.27**	**.49**	**.22**	.28	.53	.25
WVI [28]	541	**.27**	**.45**	**.18**	.28	.47	.19
WPA [14]	566	**.27**	**.43**	**.16**	.28	.47	.19
WSI [15]	514	**.27**	**.43**	**.16**	.28	.45	.17
PSJT [1]	458	**.27**	**.29**	**.02**	.28	.31	.03
AO [1]	494	**.27**	**.27**	.00	.28	.28	.00
Perceived MOS Fit							
RBI [9]	350	**.22**	**.47**	**.25**	.20	.51	.31
WVI [28]	343	**.22**	**.49**	**.27**	.20	.49	.29
WSI [15]	330	**.22**	**.38**	**.16**	.20	.39	.19
WPA [14]	356	**.22**	**.39**	**.17**	.20	.36	.16
PSJT [1]	275	.22	.23	.01	.20	.22	.01
AO [1]	338	**.22**	**.22**	.00	.20	.22	.01
Perceived Competence							
RBI [9]	350	.17	**.55**	**.38**	.22	.59	.37
WPA [14]	356	.17	**.48**	**.31**	.22	.56	.34
WVI [28]	343	.17	**.52**	**.35**	.22	.45	.23
WSI [15]	330	.17	**.41**	**.24**	.22	.40	.18
PSJT [1]	275	.17	.20	.02	.22	.25	.03
AO [1]	338	.17	.18	.01	.22	.22	.00
MOS Exceeds Expectations							
RBI [9]	350	.18	**.52**	**.34**	.29	.63	.33
WVI [28]	343	.18	**.51**	**.33**	.29	.57	.28
WPA [14]	356	.18	**.41**	**.23**	.29	.47	.17
WSI [15]	330	.18	**.35**	**.17**	.29	.42	.13
PSJT [1]	275	.18	**.26**	**.08**	.29	.38	.09
AO [1]	338	.18	.18	.00	.29	.30	.01

Note. ASVAB Only = Absolute correlation between the existing ASVAB and the criterion. ASVAB + Predictor = Multiple correlations (*R*) based on a regression model including the ASVAB and all scores for a given predictor. Bracketed numbers are the number of scores included for each predictor. The Δ*R* column indicates the increment in estimated validity (change in *R*) obtained from adding the predictors to the ASVAB. Values in the first set of columns (Uncorrected) are based on observed data. Values in the second set of columns (Corrected) are based on correlation matrices corrected for range restriction and criterion unreliability, and *R*s that have been adjusted for shrinkage using Rozeboom's (1978) formula. Predictors are sorted in descending order of the magnitude of their corrected increment in validity over the ASVAB (Corrected Δ*R*). Bolded correlations in the ASVAB Only column are statistically significant ($p < .05$). Bolded values in the ASVAB + Predictor column indicate that the Multiple *R* for the model with the ASVAB and predictor was statistically significant ($p < .05$). Bolded values in the Δ*R* column indicate that the increment in validity was statistically significant ($p < .05$).

Among the CV predictor measures, the RBI and WVI generally emerged as the predictors evidencing the most potential to increment the AFQT or the existing ASVAB in predicting MOS-specific retention criteria. Among the CV predictors, the RBI consistently evidenced the greatest increment over the AFQT and the existing ASVAB for predicting MOS-specific retention criteria. The RBI exhibited (a) an 122% gain over the AFQT ($\Delta R = .28$) and a 89% gain over the ASVAB ($\Delta R = .25$) for predicting Soldiers' Satisfaction with their MOS; (b) a 444% gain over the AFQT ($\Delta R = .40$) and a 155% gain over the ASVAB ($\Delta R = .31$) for predicting Soldiers' Perceived Fit with their MOS; (c) a 1300% gain over the AFQT ($\Delta R = .52$) and a 168% gain over the ASVAB ($\Delta R = .37$) for predicting Soldiers' Perceived Competence; and (d) a 287% gain over the AFQT ($\Delta R = .43$) and a 114% gain over the ASVAB ($\Delta R = .33$) for predicting Soldiers' perception that their current MOS Exceeds Expectations. The increment in predictive validity evidenced by the WVI ranged from .22 to .37 over the AFQT and .19 to .29 over the existing ASVAB. Consistent with the findings for the Army-wide criteria, we found that the incremental validity estimates for the RBI were notably lower when the Army Affective Commitment scale was excluded. Nevertheless, the RBI still showed significant potential to increment the existing ASVAB in predicting Soldiers' attitudes towards their MOS.[22]

Classification Potential of the CV Predictor Measures

Tables 4.7 through 4.10 summarize the classification potential of the CV predictor measures by criterion type, as measured by H_d and MPCS. In addition to H_d and MPCS, we present results on the estimated predictive validity and incremental validity over the existing ASVAB. However, it should be noted that these estimates are likely to differ from those presented in the preceding section as these represent an average based on scores that have been empirically-keyed to a criterion within each MOS. In interpreting these results, specifically as they apply to the MPCS, it is important to note that all estimates reflect the *potential* of the CV predictor measures to enhance classification and *not* to the actual gains in classification resulting from their operational use within the Army's current classification system, as we did not model important organizational factors and other constraints that contribute to the Soldier-job matching process. Similarly, these results could vary if an alternative sample of MOS is examined. Consistent with the previous section, we first present the results based on the performance-related criteria (MOS-specific JKT, performance ratings), followed by those based on the retention-related criteria (ALQ). As we expected the MOS-specific criteria to afford the CV predictor measures the greatest opportunity to evidence their classification potential, we generally focus our discussion on those. A complete reporting of the results of our analyses by criterion can be found in Appendix D.

[22] (Uncorrected) incremental validity estimates over the AFQT in predicting the MOS-specific retention criteria for the RBI *minus* the Army Affective Commitment scale were as follows: *Satisfaction with MOS* ($\Delta R = .22$, down from .25 with the Army Affective Commitment scale included); *Perceived MOS Fit* ($\Delta R = .32$, down from .43 with the Army Affective Commitment scale included); *Perceived Competence* ($\Delta R = .43$, down from .48 with the Army Affective Commitment scale included); and *MOS Exceeds Pre-Enlistment Expectations* ($\Delta R = .31$, down from .41 with the Army Affective Commitment scale included). (Uncorrected) incremental validity estimates over the ASVAB for the RBI minus the Army Affective Commitment scale were as follows: *Satisfaction with MOS* ($\Delta R = .19$, down from .22 with the Army Affective Commitment scale included); *Perceived MOS Fit* ($\Delta R = .16$, down from .27 with the Army Affective Commitment scale included); *Perceived Competence* ($\Delta R = .34$, down from .38 with the Army Affective Commitment scale included); and *MOS Exceeds Pre-Enlistment Expectations* ($\Delta R = .24$, down from .34 with the Army Affective Commitment scale included).

Maximizing Performance-Related Criteria

Tables 4.7 and 4.8 report the potential of the CV predictor measures to enhance classification over the existing ASVAB for the purposes of maximizing MOS-specific performance criteria, as measured by the increment in H_d and MPCS over the ASVAB.

Examination of Tables 4.7 and 4.8 evidences the following:

On average, all of the experimental CV predictor measures, excluding AO, showed potential to significantly enhance the classification of Soldiers over the existing ASVAB, at least for the five MOS sampled. The average increment in H_d for the CV predictor measures ranged from .42 to .99 for the MOS-specific JKT and ranged from .14 to 1.57 for the MOS-specific technical performance ratings. Similarly, the average increment in MPCS for the CV predictor measures ranged from .11 to .27 for the MOS-specific JKT and from .05 to .38 for the MOS-specific technical performance ratings. Consistent with the incremental validity results, the potential for the CV predictor measures to enhance classification was generally greater, on average, with the MOS-specific technical performance ratings (i.e., what Soldiers do) than the JKT (i.e., what Soldiers know). However, the potential increments associated with the JKT were non-trivial, at least as they apply to this sample of MOS. This pattern of results was similar at the MOS-level, except for 11B where none of the CV predictors appeared to substantially increment the existing ASVAB when classifying Soldiers to this MOS.

Among the CV predictors, the WVI consistently emerged as the predictor evidencing the most potential to increment the existing ASVAB. The WVI demonstrated the greatest increment over the existing ASVAB across the two MOS-specific performance criteria. In regards to the MOS-specific JKT, the WVI showed a 198% gain over the ASVAB, as measured by H_d, and a 82% gain, as measured by MPCS. With respect to the MOS-specific performance ratings, the WVI showed a 341% gain over the ASVAB, as measured by H_d, and a 82% gain, as measured by MPCS. The two predictors after the WVI showing the greatest classification potential for maximizing performance-based criteria were the WPA and WSI, followed by the RBI and the PSJT. In general, the relative rank ordering of the CV predictors by their classification potential remained the same when examining results by MOS. However, as can be seen in Table 4.8 there were some cross-MOS differences (e.g., for 25U, the PSJT and WPA emerged as the best predictor measures).

Table 4.7. Summary of the Classification Potential of the CV Predictor Measures in Addition to the ASVAB for the MOS-Specific Performance Criteria Averaged Across Five MOS

	Criterion													
	MOS-Specific Job Knowledge Test (JKT)							MOS-Specific Performance Rating						
Predictor	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*
ASVAB	.66	.43	--	.50	--	.33	--	.36	.13	--	.46	--	.31	--
ASVAB + PSJT [1]	.76	.58	.15	1.12	.62	.44	.11	.40	.16	.03	.61	.14	.36	.05
ASVAB + RBI [9]	.72	.52	.09	.92	.42	.46	.14	.57	.33	.20	1.01	.55	.47	.16
ASVAB + WSI [15]	.74	.55	.12	1.00	.50	.48	.16	.53	.28	.15	1.10	.64	.51	.20
ASVAB + WPA [14]	.78	.61	.18	1.28	.78	.53	.20	.65	.42	.29	1.44	.98	.57	.26
ASVAB + WVI [28]	.77	.60	.17	1.49	.99	.59	.27	.73	.53	.40	2.03	1.57	.69	.38
ASVAB + AO [1]	.66	.43	.00	.53	.03	.34	.01	.36	.13	.00	.47	.00	.32	.01

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table 4.8. Summary of the Classification Potential of the CV Predictor Measures in Addition to the ASVAB for the MOS-Specific Performance Criteria Averaged Across and by Five MOS

	Overall				MOS									
					11B		19K		25U		63B		68W	
	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
MOS-Specific Job Knowledge Test (JKT)														
ASVAB	.50	--	.33	--	.12	--	.19	--	.03	--	.79	--	.86	--
ASVAB + PSJT [1]	1.12	.62	.44	.11	.08	-.04	.16	-.03	1.27	1.25	.77	-.03	.81	-.06
ASVAB + RBI [9]	.92	.42	.46	.14	.19	.07	.31	.12	.65	.63	.86	.06	.91	.05
ASVAB + WSI [15]	1.00	.50	.48	.16	.21	.09	.45	.26	.77	.75	.84	.05	.73	-.13
ASVAB + WPA [14]	1.28	.78	.53	.20	.16	.04	.44	.25	.97	.94	.96	.17	.95	.09
ASVAB + WVI [28]	1.49	.99	.59	.27	.25	.13	.83	.64	.38	.35	1.18	.39	.98	.12
ASVAB + AO [1]	.53	.03	.34	.01	.15	.02	.23	.04	.03	.00	.79	.00	.83	-.03
MOS-Specific Technical Performance Rating														
ASVAB	.46	--	.31	--	.07	--	.45	--	.75	--	.36	--	.48	--
ASVAB + PSJT [1]	.61	.14	.36	.05	.11	.04	.47	.02	1.03	.28	.35	-.02	.47	-.01
ASVAB + RBI [9]	1.01	.55	.47	.16	.10	.03	.41	-.04	1.07	.32	.96	.60	.66	.18
ASVAB + WSI [15]	1.10	.64	.51	.20	.19	.12	.64	.19	1.18	.43	.53	.17	.78	.30
ASVAB + WPA [14]	1.44	.98	.57	.26	.02	-.04	.89	.44	1.45	.70	.81	.45	.96	.48
ASVAB + WVI [28]	2.03	1.57	.69	.38	.14	.07	1.11	.66	.94	.19	1.36	1.00	1.06	.58
ASVAB + AO [1]	.47	.00	.32	.01	.11	.04	.44	-.01	.73	-.02	.35	-.01	.46	-.02

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Maximizing Retention-Related Criteria

Tables 4.9 and 4.10 report the potential of the CV predictor measures to enhance classification over the existing ASVAB for the purposes of maximizing retention-related criteria, as measured by the increment in H_d and MPCS over the ASVAB.

Examination of Tables 4.9 and 4.10 evidences the following:

The potential for the CV predictor measures to enhance classification was generally greater, on average, when maximizing retention than performance-related criteria. Consistent with the incremental validity results, the CV predictors evidenced the greatest potential to add over the existing ASVAB, on average, when maximizing the retention-related criteria than the performance-related criteria. Although, as noted in the previous section, the potential of the CV predictor measures to enhance classification for the purposes of maximizing Soldiers' MOS-specific technical performance was substantial.

All the experimental CV predictor measures, except the PSJT, showed potential to significantly enhance the classification of Soldiers over the existing ASVAB, at least for the five MOS sampled. The average increment in H_d for the CV predictor measures, excluding the PSJT, ranged from .65 to 1.24 for Satisfaction with the Army and from .75 to 1.34 for Perceived Army Fit. Similarly, the average increment in MPCS for the CV predictor measures, excluding the PSJT and AO, ranged from .24 to .37 for the Satisfaction with the Army and from .19 to .30 for the Perceived Army Fit. For the MOS-specific retention criteria, the average increment in H_d for the CV predictor measures ranged from .38 to 1.18 for Satisfaction with MOS and from .55 to 1.75 for Perceived MOS Fit. The average MPCS for the CV predictor measures, excluding the PSJT and AO, ranged from .15 to .31 for Satisfaction with MOS and from .22 to .44 for Perceived MOS Fit. This pattern of results was similar at the MOS-level. Relative to the other MOS, 11B generally evidenced the smallest potential increments over the existing ASVAB, on average, when the CV predictor measures were added.

Among the experimental CV predictors, the WPA, WVI, and WSI generally emerged as the predictors evidencing the most potential to increment the existing ASVAB. The WPA and WVI consistently demonstrated the greatest increment over the existing ASVAB on Soldiers' perceived fit with the Army and their MOS. Whereas, the WSI, followed by the WPA and WVI, showed the greatest potential to increment the ASVAB on Soldiers' satisfaction with the Army and their MOS. In general, the relative rank ordering of the CV predictors by their classification potential remained the same when examining results at the MOS-level. As with the performance-related criteria, where there were differences, they were specific to 25U.

Table 4.9. Summary of the Classification Potential of the CV Predictor Measures in Addition to the ASVAB for the Retention-Related Criteria Averaged Across Five MOS

	Criterion													
	Satisfaction with Army							Satisfaction with MOS						
Predictor	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*
ASVAB	.21	.04	--	.23	--	.22	--	.34	.12	--	.44	--	.29	--
ASVAB + PSJT [1]	.34	.11	.07	.39	.16	.30	.08	.37	.14	.02	.49	.05	.31	.02
ASVAB + RBI [9]	.68	.47	.42	.88	.65	.46	.24	.58	.33	.22	.82	.38	.44	.15
ASVAB + WSI [15]	.63	.39	.35	1.46	1.24	.56	.34	.65	.42	.30	1.61	1.17	.58	.29
ASVAB + WPA [14]	.54	.30	.25	1.06	.83	.50	.28	.69	.48	.36	1.62	1.18	.60	.31
ASVAB + WVI [28]	.66	.44	.39	1.40	1.17	.59	.37	.65	.42	.30	1.50	1.06	.60	.31
ASVAB + AO [1]	.24	.06	.01	.29	.06	.25	.03	.38	.15	.03	.57	.13	.33	.04
	Perceived Army Fit							Perceived MOS Fit						
Predictor	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*
ASVAB	.46	.21	--	.96	--	.47	--	.19	.04	--	.17	--	.18	--
ASVAB + PSJT [1]	.47	.22	.01	1.00	.04	.49	.01	.27	.07	.04	.25	.08	.24	.05
ASVAB + RBI [9]	.71	.51	.30	1.87	.91	.69	.21	.74	.55	.51	.72	.55	.40	.22
ASVAB + WSI [15]	.66	.43	.22	1.71	.75	.66	.19	.61	.37	.34	1.30	1.13	.53	.35
ASVAB + WPA [14]	.70	.49	.28	2.15	1.19	.74	.27	.69	.47	.43	1.92	1.75	.62	.43
ASVAB + WVI [28]	.78	.60	.39	2.30	1.34	.77	.30	.74	.54	.50	1.65	1.47	.63	.44
ASVAB + AO [1]	.48	.23	.02	1.07	.10	.49	.02	.27	.07	.04	.37	.20	.26	.08

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table 4.10. Summary of the Classification Potential of the CV Predictor Measures in Addition to the ASVAB for the Retention-Related Criteria Averaged Across and by Five MOS

	Overall				MOS									
					11B		19K		25U		63B		68W	
Predictors	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
Satisfaction with the Army														
ASVAB	.23	--	.22	--	.08	--	.36	--	.42	--	.36	--	.22	--
ASVAB + PSJT [1]	.39	.16	.30	.08	.15	.07	.56	.20	.54	.12	.30	-.06	.30	.08
ASVAB + RBI [9]	.88	.65	.46	.24	.36	.28	.43	.07	.75	.33	.68	.32	.33	.12
ASVAB + WSI [15]	1.46	1.24	.56	.34	.20	.11	.86	.50	1.50	1.08	.73	.37	.46	.24
ASVAB + WPA [14]	1.06	.83	.50	.28	.14	.06	1.09	.73	.66	.24	.64	.28	.74	.53
ASVAB + WVI [28]	1.40	1.17	.59	.37	.30	.22	.76	.40	.55	.14	.71	.35	1.21	.99
ASVAB + AO [1]	.29	.06	.25	.03	.10	.02	.40	.04	.52	.10	.39	.03	.19	-.02
Satisfaction with MOS														
ASVAB	.44	--	.29	--	.11	--	.38	--	.43	--	.18	--	.76	--
ASVAB + PSJT [1]	.49	.05	.31	.02	.13	.02	.46	.08	.41	-.02	.15	-.03	.78	.02
ASVAB + RBI [9]	.82	.38	.44	.15	.30	.19	.71	.33	.72	.29	.20	.03	.61	-.15
ASVAB + WSI [15]	1.61	1.17	.58	.29	.25	.15	1.02	.63	1.38	.95	.37	.19	.68	-.09
ASVAB + WPA [14]	1.62	1.18	.60	.31	.17	.06	.83	.45	1.23	.80	.95	.78	.79	.03
ASVAB + WVI [28]	1.50	1.06	.60	.31	.27	.16	.74	.36	.54	.12	1.10	.92	1.02	.26
ASVAB + AO [1]	.57	.13	.33	.04	.10	-.01	.50	.12	.58	.15	.22	.04	.80	.04

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table 4.10. (Continued)

Predictors	Overall				MOS									
					11B		19K		25U		63B		68W	
	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
Perceived Army Fit														
ASVAB	.96	--	.47	--	.28	--	.37	--	1.00	--	.66	--	.56	--
ASVAB + PSJT [1]	1.00	.04	.49	.01	.29	.01	.39	.02	1.02	.02	.67	.01	.57	.01
ASVAB + RBI [9]	1.87	.91	.69	.21	.59	.31	.67	.30	1.29	.29	.63	-.03	.56	.00
ASVAB + WSI [15]	1.71	.75	.66	.19	.46	.17	.86	.48	1.11	.11	.67	.02	.73	.17
ASVAB + WPA [14]	2.15	1.19	.74	.27	.50	.22	.59	.22	1.39	.39	1.06	.40	.78	.22
ASVAB + WVI [28]	2.30	1.34	.77	.30	.50	.21	.68	.31	.93	-.07	1.20	.54	1.17	.61
ASVAB + AO [1]	1.07	.10	.49	.02	.28	-.01	.36	-.01	1.16	.17	.64	-.02	.60	.04
Perceived MOS Fit														
ASVAB	.17	--	.18	--	.07	--	.30	--	.22	--	.26	--	.31	--
ASVAB + PSJT [1]	.25	.08	.24	.05	.17	.10	.28	-.02	.27	.05	.19	-.08	.44	.13
ASVAB + RBI [9]	.72	.55	.40	.22	.36	.29	.70	.40	.17	-.05	.48	.22	.34	.02
ASVAB + WSI [15]	1.30	1.13	.53	.35	.25	.17	.77	.47	1.41	1.19	.52	.25	.45	.13
ASVAB + WPA [14]	1.92	1.75	.62	.43	.15	.08	1.11	.81	1.20	.99	.68	.42	.99	.68
ASVAB + WVI [28]	1.65	1.47	.63	.44	.25	.18	1.00	.70	.74	.52	.79	.53	1.15	.84
ASVAB + AO [1]	.37	.20	.26	.08	.09	.02	.32	.02	.68	.46	.31	.04	.38	.07

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

SECTION 5: SUMMARY AND CONCLUSIONS

Key Findings

The Army has a number of personnel needs as it transforms to meet the challenges of today and the near future. As a result, the selection and classification of new recruits is as important now, and arguably more so, as ever before. The purpose of the Army Class CV was to provide answers to two questions:

- Which experimental CV predictor measures have the potential to enhance the selection of recruits?

- Which experimental CV predictor measures have the potential to enhance the classification of recruits to entry-level MOS?

Enhancing the Selection of Recruits

In regards to the first question, the results of our analyses show:

- Consistent with prior research, scores on the ASVAB emerged as significant predictors of cognitively laden or knowledge-based performance criteria (i.e., what a Soldier knows). Nevertheless, most of the experimental CV predictors evidenced some potential to increment the ASVAB in predicting Soldiers' technical job knowledge.

- The CV predictor measures exhibited significant potential for incrementing prediction over the existing AFQT and ASVAB for the on-the-job performance or behaviorally-based criteria (i.e., what a Soldier does), where a "will do" component is required, to some degree, for successful performance on a sustained or daily basis. All the experimental CV predictor measures, except PSJT and AO, consistently evidenced substantial increments in prediction over and above the AFQT and the ASVAB on on-the-job performance criteria, technical and non-technical.

- In regards to the on-the-job performance or behaviorally-based criteria, the WVI and WPA consistently emerged as the predictors with the greatest potential to increment the existing AFQT and ASVAB on three of the four performance dimensions assessed (MOS-Specific Technical Performance, Effort and Professionalism, and Works Effectively with Others), while the RBI emerged as the predictor evidencing the greatest incremental validity on the fourth dimension assessing Soldiers' physical fitness (Demonstrating Physical Fitness).

- Consistent with past research, the existing ASVAB did not emerge as a significant predictor of Soldiers' attitudes towards the Army and their propensity to make the Army a career. All the experimental CV predictor measures, except AO, significantly incremented the validity of the AFQT and the existing ASVAB in predicting Army-wide retention criteria.

- As with the Army-wide retention criteria, all the experimental CV predictor measures, except AO and to a lesser extent the PSJT, significantly incremented the AFQT and the existing ASVAB in predicting MOS-specific retention criteria. Scores on the existing ASVAB, however, were significantly predictive of some but not all of these criteria, demonstrating that the use of the ASVAB to classify Soldiers to MOS commensurate with their pre-enlistment KSAOs carries value for promoting retention, in addition to Soldier job performance.

- Among the experimental CV predictor measures, the RBI generally emerged as the predictor with the greatest potential to increment the AFQT and ASVAB in predicting Army-wide and MOS-specific retention criteria, followed by the WVI and WPA. As noted, the incremental validity estimates for the RBI were considerably lower when excluding the Army Affective Commitment scale.

Enhancing the Classification of New Recruits to Entry-Level Jobs

In regards to the second question, the results of our analyses demonstrate:

- All of the experimental CV predictor measures evidenced potential to significantly enhance the classification of Soldiers over the existing ASVAB for the purposes of maximizing Soldier job performance. Consistent with the preceding findings, the CV predictor measures showed greater potential to increment the existing ASVAB, on average, when the goal was to maximize a behaviorally-based rather than a knowledge-based performance criterion.

- Among the experimental CV predictor measures, the WVI consistently emerged as the predictor demonstrating the most potential to increment the existing ASVAB when classifying Soldiers to maximize job performance. After the WVI, the predictors showing the greatest classification potential for maximizing performance-based outcomes were the WPA and WSI, followed by the RBI and the PSJT.

- Consistent with the preceding findings, the potential of the experimental CV predictor measures to enhance classification was generally greater, on average, when maximizing retention than performance-based criteria. All other factors being equal, the CV predictor measures were more effective at differentiating Soldiers' attitudes towards their MOS than in differentiating Soldiers' performance in those jobs, at least for the group of jobs sampled in the CV.

- All of the experimental CV predictor measures, except the PSJT and AO, showed potential to significantly enhance, over the existing ASVAB, the classification of Soldiers to jobs to maximize retention and Soldiers' attitudes towards their MOS. For promoting retention, the WVI, WPA, and WSI generally emerged as the experimental predictors evidencing the most potential to increment the existing ASVB, followed by the RBI.

Generalizability of Research

As with any research, there are limitations on the generalizability of its findings. Here we discuss characteristics of the Army Class CV sample and research design that place limitations on the extent to which the reported findings would generalize to an operational Army context.

First, the Army Class CV sample did not exactly mirror the population of first-term Soldiers, both in terms of MOS representation and selected demographics (e.g., gender). Nearly 44% of the sample was 11B Infantryman. If the 19K Armor Crewman were included, close to 58% of the total Army Class CV sample represented a Combat MOS. In comparison, roughly 25.9% of Active Army Enlisted were in Infantry and related combat jobs in 2005 (*Population Representation in the Military Services*: http://www.dod.mil/prhome/poprep2005/). Similarly, about 96% of the CV sample was male. Although this was to be expected given the composition of MOS constituting the CV sample, this proportion (i.e., 4% female and 96% male) was considerably different from the gender representation reflected in the 2005 Active Army Enlisted population, which was 14.1% female and 85.9% male (*Population Representation in the Military Services*: http://www.dod.mil/prhome/poprep2005/).

Second, a concurrent validation research design fundamentally differs from an operational setting in which the predictor measures would be administered to applicants instead of experienced Soldiers. As a result, the findings from a concurrent design can reasonably be expected to differ from those obtained in an operational setting. Consistent with the Select21 CV, there are two factors that are of particular concern: (a) the susceptibility of experimental measures such as the RBI and WPA to faking and coaching effects when administered to applicants, and (b) differences between applicants and experienced Soldiers' responses to the experimental predictor measures owing to differences in their time and experience in the Army.

With regard to the response distortion issue, experienced Soldiers participating in a research effort have minimal, if any, motivation to misrepresent their standing on the predictor measures for the purposes of increasing their likelihood of being selected into the Army or classified into their desired job. Conversely, in an operational applicant setting, one can reasonably expect that: (a) applicants will be more motivated to misrepresent themselves to look good to the Army and (b) some applicants will have been coached on how to do well on the predictor measures. The extent to which the CV predictor measures, specifically those using a self-report format (e.g., RBI and WPA), would be compromised in an operational setting cannot be inferred from the CV findings. One of the analysis objectives of the Army Class Longitudinal Validation (LV) Research will be to examine how the psychometric properties of the soldoerexperimental predictor measures administered a setting conceptually closer to an operational setting – Reception Battalions – compares to those observed in the current research.

Another factor potentially affecting the generalizablity of the CV findings is that Soldiers' responses to the predictor measures could be influenced by their experiences in the Army. For example, many of the items on the RBI ask about past behavior. For experienced Soldiers, their responses likely would include post-enlistment behaviors that have been influenced by their time and experiences in the Army. Conversely, Army applicants can only

answer the RBI items based on their "pre-Army" experiences. Another example of this issue occurs with the WSI where Soldiers were asked what types of work best fit their preferences. Similar to the RBI, the responses of experienced Soldiers are likely to be influenced by their Army experience; indeed, experienced Soldiers could be expected to provide a more accurate appraisal of their work-related preferences than applicants owing to their greater job tenure and experience in the Army. Because the Army Class CV sample was comprised of exclusively experienced Soldiers, the CV data does not permit us to examine this issue and its implications for the incremental validity and classification potential of the CV predictor measures. However, as with the potential for faking and coaching effects, this is an issue that could be addressed by future research conducted in an operational context.

Conclusions

This report has focused on the findings of the Army Class CV. The objective of this research effort was to investigate the potential of new, experimental predictor measures to enhance the selection and classification of recruits into entry-level jobs. The goal underlying this objective was to identify predictor measures with the potential to maximize outcomes valued by the Army, specifically in terms of the performance and retention of first-term enlisted Soldiers. The results of the CV indicate that many of the experimental predictor measures would significantly enhance the selection and classification of recruits over and above the existing ASVAB. We are currently in the process of conducting a LV research effort to extend these findings and to examine the value of these measures when administered in a setting conceptually closer to an operational setting – Reception Battalions.

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APPENDIX A
PSYCHOMETRIC PROPERTIES OF THE CV PREDICTOR MEASURES

Armed Services Vocational Aptitude Battery (ASVAB)

Basic Descriptive Statistics (Means, SDs) for the ASVAB Subtest and Aptitude Area (AA) Composite Scores

Table A1.1. Descriptive Statistics for ASVAB Subtest and Aptitude Area (AA) Composite Scores in the Full CV Sample and by MOS

Score	Full CV Sample		11B		19K		25U		63B		68W	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Armed Forces Qualification Test (AFQT)	57.49	17.52	57.27	16.88	51.99	18.12	57.56	15.78	50.37	16.82	73.80	10.08
ASVAB Subtests												
General Science (GS)	52.72	6.95	53.13	6.59	52.06	7.86	50.49	6.73	50.77	7.02	56.70	5.28
Arithmetic Reasoning (AR)	51.65	7.02	51.56	7.08	49.33	6.91	51.42	6.53	49.81	6.73	57.39	4.26
Word Knowledge (WK)	52.38	5.28	52.78	5.03	51.19	5.92	52.26	5.57	50.01	4.95	55.26	3.70
Paragraph Comprehension (PC)	52.67	5.45	53.04	5.41	51.67	5.13	53.32	6.00	50.47	5.60	54.69	3.75
Math Knowledge (MK)	53.33	6.77	52.82	6.88	52.06	6.87	54.62	5.95	51.40	6.40	57.83	5.28
Electronics Information (EI)	51.94	6.91	51.64	7.28	52.00	6.23	50.55	7.35	52.96	5.98	53.25	6.65
Auto Shop Information (AS)	50.82	7.52	50.68	7.50	50.39	7.20	47.63	6.95	54.65	7.44	50.67	6.95
Mechanical Comprehension (MC)	53.09	7.36	53.13	7.59	52.47	7.55	50.99	7.03	53.45	6.47	55.55	7.01
Assembling Objects (AO)	53.80	8.12	53.27	8.17	54.46	9.05	52.79	7.76	53.51	8.20	56.08	6.57
Verbal Composite (VE)	52.94	4.98	53.20	4.68	51.82	5.49	52.75	5.28	50.88	4.85	56.06	3.46
Aptitude Area (AA)												
Clerical (CL)	105.76	10.63	105.54	10.54	102.41	10.69	105.63	9.53	102.25	10.07	115.21	6.49
Combat (CO)	106.00	10.74	105.70	10.94	103.55	10.95	103.84	9.92	105.07	10.00	113.63	7.93
Electrical (EL)	105.76	10.40	105.50	10.56	103.19	10.60	103.86	9.85	104.62	9.65	113.38	7.35
Field Artillery (FA)	105.99	10.82	105.71	11.01	103.38	10.99	104.00	9.93	104.79	10.10	113.93	7.90
General Maintenance (GM)	105.46	10.93	105.18	11.15	103.03	11.03	102.72	10.45	105.17	10.19	112.79	8.06
Mechanical Maintenance (MM)	104.80	11.61	104.51	11.87	102.80	11.53	100.88	11.32	106.90	10.93	110.11	9.55
Operators and Food Service (OF)	105.42	10.89	105.24	11.04	102.80	11.10	102.70	10.42	105.00	10.19	112.84	7.93
Signal Communications (SC)	106.01	10.33	105.66	10.50	103.36	10.43	104.84	9.53	104.24	9.62	114.02	7.20
Skilled Technical (ST)	106.01	10.35	105.87	10.34	103.20	10.75	104.56	9.56	103.74	9.63	114.35	6.94

Note. n = 536 for Word Knowledge (WK); n = 534 for Paragraph Comprehension (PC); n = 482 for Assembling Objects (AO). n = 576 for all other scores.

Intercorrelations among ASVAB Subtest and Aptitude Area (AA) Composite Scores

Table A1.2. Intercorrelations among ASVAB Subtest Scores in the Full CV Sample

Subtest		1	2	3	4	5	6	7	8
1	General Science (GS)	-							
2	Arithmetic Reasoning (AR)	**.36**	-						
3	Word Knowledge (WK)	**.61**	**.32**	-					
4	Paragraph Comprehension (PC)	**.41**	**.31**	**.44**	-				
5	Math Knowledge (MK)	**.25**	**.59**	**.17**	**.24**	-			
6	Electronics Information (EI)	**.45**	**.24**	**.37**	**.22**	.06	-		
7	Auto Shop Information (AS)	**.32**	**.12**	**.16**	**.10**	**-.11**	**.51**	-	
8	Mechanical Comprehension (MC)	**.45**	**.43**	**.32**	**.28**	**.26**	**.42**	**.44**	-
9	Assembling Objects (AO)	**.27**	**.36**	**.17**	**.19**	**.28**	**.21**	**.17**	**.47**

Note. n = 448-576. Statistically significant correlations are bolded, $p < .01$ (one-tailed).

Table A1.3. Intercorrelations among Aptitude Area (AA) Composite Scores in the Full CV Sample

Aptitude Area		1	2	3	4	5	6	7	8
1	Clerical (CL)	-							
2	Combat (CO)	**.90**	-						
3	Electrical (EL)	**.92**	**.99**	-					
4	Field Artillery (FA)	**.92**	**1.00**	**.99**	-				
5	General Maintenance (GM)	**.87**	**.99**	**.99**	**.98**	-			
6	Mechanical Maintenance (MM)	**.69**	**.91**	**.91**	**.90**	**.95**	-		
7	Operators and Food Service (OF)	**.88**	**.98**	**.99**	**.98**	**.99**	**.95**	-	
8	Signal Communications (SC)	**.95**	**.98**	**.99**	**.99**	**.96**	**.86**	**.96**	-
9	Skilled Technical (ST)	**.96**	**.98**	**.99**	**.98**	**.96**	**.85**	**.97**	**.99**

Note. n = 576. Statistically significant correlations are bolded, $p < .01$ (one-tailed).

Intercorrelations among ASVAB Subtest and Aptitude Area (AA) Composite Scores (cont'd)

Table A1.4. Intercorrelations among ASVAB Subtest Scores for 11B in the Full CV Sample

Subtest	1	2	3	4	5	6	7	8
1 General Science (GS)	-							
2 Arithmetic Reasoning (AR)	**.37**	-						
3 Word Knowledge (WK)	**.57**	**.23**	-					
4 Paragraph Comprehension (PC)	**.38**	**.27**	**.40**	-				
5 Math Knowledge (MK)	**.30**	**.62**	**.17**	**.21**	-			
6 Electronics Information (EI)	**.50**	**.25**	**.43**	**.24**	.10	-		
7 Auto Shop Information (AS)	**.30**	**.15**	**.23**	**.13**	-.07	**.49**	-	
8 Mechanical Comprehension (MC)	**.41**	**.42**	**.29**	**.31**	**.27**	**.43**	**.47**	-
9 Assembling Objects (AO)	**.23**	**.38**	**.13**	**.23**	**.34**	**.21**	**.20**	**.43**

Note. n = 199-264. Statistically significant correlations are bolded, $p < .05$ (one-tailed).

Table A1.5. Intercorrelations among Aptitude Area (AA) Composite Scores for 11B in the Full CV Sample

Aptitude Area	1	2	3	4	5	6	7	8
1 Clerical (CL)	-							
2 Combat (CO)	**.91**	-						
3 Electrical (EL)	**.92**	**.99**	-					
4 Field Artillery (FA)	**.93**	**1.00**	**.99**	-				
5 General Maintenance (GM)	**.88**	**.99**	**.99**	**.98**	-			
6 Mechanical Maintenance (MM)	**.72**	**.92**	**.92**	**.91**	**.95**	-		
7 Operators and Food Service (OF)	**.88**	**.99**	**.99**	**.98**	**.99**	**.96**	-	
8 Signal Communications (SC)	**.95**	**.98**	**.99**	**.99**	**.97**	**.87**	**.97**	-
9 Skilled Technical (ST)	**.96**	**.98**	**.99**	**.99**	**.97**	**.86**	**.97**	**.99**

Note. n = 264. Statistically significant correlations are bolded, $p < .01$ (one-tailed).

Intercorrelations among ASVAB Subtest and Aptitude Area (AA) Composite Scores (cont'd)

Table A1.6. Intercorrelations among ASVAB Subtest Scores for 19K in the Full CV Sample

Subtest	1	2	3	4	5	6	7	8
1 General Science (GS)	-							
2 Arithmetic Reasoning (AR)	**.28**	-						
3 Word Knowledge (WK)	**.69**	**.41**	-					
4 Paragraph Comprehension (PC)	**.52**	**.29**	**.46**	-				
5 Math Knowledge (MK)	**.30**	**.45**	**.20**	**.27**	-			
6 Electronics Information (EI)	**.51**	**.31**	**.47**	**.38**	-.04	-		
7 Auto Shop Information (AS)	**.33**	.16	.16	.18	-.14	**.52**	-	
8 Mechanical Comprehension (MC)	**.64**	**.38**	**.55**	**.32**	**.21**	**.56**	**.45**	-
9 Assembling Objects (AO)	**.31**	**.37**	**.32**	**.23**	**.23**	.10	-.02	**.49**

Note. n = 74-87. Statistically significant correlations are bolded, $p < .05$ (one-tailed).

Table A1.7. Intercorrelations among Aptitude Area (AA) Composite Scores for 19K in the Full CV Sample

Aptitude Area	1	2	3	4	5	6	7	8
1 Clerical (CL)	-							
2 Combat (CO)	**.91**	-						
3 Electrical (EL)	**.93**	**.99**	-					
4 Field Artillery (FA)	**.93**	**1.00**	**.99**	-				
5 General Maintenance (GM)	**.88**	**.99**	**.99**	**.98**	-			
6 Mechanical Maintenance (MM)	**.72**	**.91**	**.92**	**.90**	**.96**	-		
7 Operators and Food Service (OF)	**.89**	**.98**	**.99**	**.98**	**1.00**	**.96**	-	
8 Signal Communications (SC)	**.96**	**.98**	**.99**	**.99**	**.97**	**.86**	**.96**	-
9 Skilled Technical (ST)	**.96**	**.98**	**.99**	**.99**	**.97**	**.86**	**.97**	**.99**

Note. n = 87 Statistically significant correlations are bolded, $p < .01$ (one-tailed).

Intercorrelations among ASVAB Subtest and Aptitude Area (AA) Composite Scores (cont'd)

Table A1.8. Intercorrelations among ASVAB Subtest Scores for 25U in the Full CV Sample

Subtest		1	2	3	4	5	6	7	8
1	General Science (GS)	-							
2	Arithmetic Reasoning (AR)	**.37**	-						
3	Word Knowledge (WK)	**.65**	**.34**	-					
4	Paragraph Comprehension (PC)	**.46**	**.28**	**.52**	-				
5	Math Knowledge (MK)	.03	**.44**	-.06	.05	-			
6	Electronics Information (EI)	**.46**	**.27**	**.26**	**.22**	.10	-		
7	Auto Shop Information (AS)	**.48**	**.24**	**.34**	**.21**	-.02	**.63**	-	
8	Mechanical Comprehension (MC)	**.37**	**.42**	**.31**	**.24**	.11	**.29**	**.45**	-
9	Assembling Objects (AO)	**.43**	.21	.19	.10	.10	**.32**	**.35**	**.48**

Note. n = 60-73. Statistically significant correlations are bolded, $p < .05$ (one-tailed).

Table A1.9. Intercorrelations among Aptitude Area (AA) Composite Scores for 25U in the Full CV Sample

Aptitude Area		1	2	3	4	5	6	7	8
1	Clerical (CL)	-							
2	Combat (CO)	**.90**	-						
3	Electrical (EL)	**.92**	**.99**	-					
4	Field Artillery (FA)	**.92**	**1.00**	**.99**	-				
5	General Maintenance (GM)	**.87**	**.99**	**.99**	**.98**	-			
6	Mechanical Maintenance (MM)	**.74**	**.94**	**.94**	**.92**	**.97**	-		
7	Operators and Food Service (OF)	**.89**	**.98**	**.99**	**.98**	**.99**	**.96**	-	
8	Signal Communications (SC)	**.95**	**.98**	**.99**	**.98**	**.97**	**.90**	**.97**	-
9	Skilled Technical (ST)	**.96**	**.97**	**.98**	**.98**	**.96**	**.88**	**.97**	**.98**

Note. n = 73. Statistically significant correlations are bolded, $p < .01$ (one-tailed).

Intercorrelations among ASVAB Subtest and Aptitude Area (AA) Composite Scores (cont'd)

Table A1.10. Intercorrelations among ASVAB Subtest Scores for 63B in the Full CV Sample

Subtest		1	2	3	4	5	6	7	8
1	General Science (GS)	-							
2	Arithmetic Reasoning (AR)	**.22**	-						
3	Word Knowledge (WK)	**.51**	**.17**	-					
4	Paragraph Comprehension (PC)	**.29**	**.29**	**.35**	-				
5	Math Knowledge (MK)	**.05**	**.63**	.02	**.31**	-			
6	Electronics Information (EI)	**.32**	.17	**.32**	**.23**	.04	-		
7	Auto Shop Information (AS)	**.48**	.12	.15	.05	-.10	**.48**	-	
8	Mechanical Comprehension (MC)	**.40**	**.49**	**.28**	**.22**	**.31**	**.39**	**.42**	-
9	Assembling Objects (AO)	**.27**	**.41**	.19	.02	**.23**	**.21**	.15	**.49**

Note. n = 72-83. Statistically significant correlations are bolded, $p < .05$ (one-tailed).

Table A1.11. Intercorrelations among Aptitude Area (AA) Composite Scores for 63B in the Full CV Sample

Aptitude Area		1	2	3	4	5	6	7	8
1	Clerical (CL)	-							
2	Combat (CO)	**.89**	-						
3	Electrical (EL)	**.92**	**.99**	-					
4	Field Artillery (FA)	**.92**	**1.00**	**.99**	-				
5	General Maintenance (GM)	**.85**	**.99**	**.98**	**.98**	-			
6	Mechanical Maintenance (MM)	**.68**	**.92**	**.91**	**.90**	**.96**	-		
7	Operators and Food Service (OF)	**.86**	**.99**	**.99**	**.98**	**1.00**	**.95**	-	
8	Signal Communications (SC)	**.96**	**.97**	**.99**	**.98**	**.95**	**.84**	**.95**	-
9	Skilled Technical (ST)	**.96**	**.98**	**.99**	**.98**	**.95**	**.84**	**.96**	**.99**

Note. n = 83. Statistically significant correlations are bolded, $p < .01$ (one-tailed).

Intercorrelations among ASVAB Subtest and Aptitude Area (AA) Composite Scores (cont'd)

Table A1.12. Intercorrelations among ASVAB Subtest Scores for 68W in the Full CV Sample

Subtest		1	2	3	4	5	6	7	8
1	General Science (GS)	-							
2	Arithmetic Reasoning (AR)	.12	-						
3	Word Knowledge (WK)	**.46**	.03	-					
4	Paragraph Comprehension (PC)	.19	.14	.09	-				
5	Math Knowledge (MK)	.08	**.41**	-.05	.11	-			
6	Electronics Information (EI)	**.32**	.11	**.34**	.05	-.04	-		
7	Auto Shop Information (AS)	**.28**	**.04**	.05	**.25**	-.16	**.44**	-	
8	Mechanical Comprehension (MC)	**.31**	**.45**	.11	**.24**	**.29**	**.32**	**.35**	-
9	Assembling Objects (AO)	-.03	**.21**	-.18	**.26**	**.28**	.17	**.24**	**.49**

Note. n =49-69. Statistically significant correlations are bolded, $p < .05$ (one-tailed).

Table A1.13. Intercorrelations among Aptitude Area (AA) Composite Scores for 68W in the Full CV Sample

Aptitude Area		1	2	3	4	5	6	7	8
1	Clerical (CL)	-							
2	Combat (CO)	**.85**	-						
3	Electrical (EL)	**.86**	**.98**	-					
4	Field Artillery (FA)	**.88**	**1.00**	**.98**	-				
5	General Maintenance (GM)	**.79**	**.98**	**.98**	**.97**	-			
6	Mechanical Maintenance (MM)	**.60**	**.90**	**.91**	**.88**	**.95**	-		
7	Operators and Food Service (OF)	**.80**	**.98**	**.98**	**.97**	**.99**	**.95**	-	
8	Signal Communications (SC)	**.92**	**.97**	**.98**	**.98**	**.95**	**.83**	**.94**	-
9	Skilled Technical (ST)	**.93**	**.97**	**.98**	**.98**	**.94**	**.82**	**.95**	**.98**

Note. n = 69. Statistically significant correlations are bolded, $p < .01$ (one-tailed).

Correlations between AFQT and ASVAB Subtest Scores and Criteria

Table A1.14. Correlations between AFQT and ASVAB Subtest Scores and Criteria for the Full CV Sample

	Criterion Type/Scale												
	Performance Criteria					Retention Criteria							
	Army-Wide			*MOS-Specific*		*Army-Wide*				*MOS-Specific*			
Score	Effort	Others	PFit	PerRat	JKT	ASat	AFit	Attrit	CarInt	MSat	MFit	PerCm	MExp
Armed Forces Qualification Test (AFQT)	**.15**	.10	-.06	**.12**	**.43**	-.07	.01	-.04	-.05	**-.23**	.00	.05	-.09
ASVAB Subtests													
General Science (GS)	.06	.01	-.08	.02	**.44**	-.05	.07	-.06	-.03	**-.17**	.03	**.10**	-.04
Arithmetic Reasoning (AR)	**.13**	.08	-.03	**.14**	**.34**	-.04	.02	-.04	-.03	**-.13**	.10	.09	-.01
Word Knowledge (WK)	.00	-.03	**-.13**	.05	**.35**	-.04	.00	-.03	-.01	**-.21**	-.05	.01	**-.12**
Paragraph Comprehension (PC)	.08	.04	**-.10**	.03	**.30**	**-.12**	-.07	-.02	**-.10**	**-.24**	-.07	-.02	**-.14**
Math Knowledge (MK)	**.19**	**.13**	.06	**.15**	**.24**	-.01	.03	-.05	-.04	**-.10**	.05	.03	.00
Electronics Information (EI)	.07	.04	.02	.06	**.35**	-.01	.07	-.01	-.02	-.07	.04	.03	-.03
Auto Shop Information (AS)	**.11**	.07	.01	**.14**	**.32**	.02	**.10**	-.08	.02	-.02	**.12**	.06	.02
Mechanical Comprehension (MC)	.03	.00	-.03	**.09**	**.45**	-.06	.03	-.06	-.04	-.08	**.13**	.07	-.04
Assembling Objects (AO)	.06	.03	.03	**.09**	**.25**	-.02	-.03	.02	-.02	-.05	.07	-.01	-.01
Verbal Composite (VE)	.00	-.01	**-.13**	.02	**.39**	**-.08**	-.02	-.01	-.04	**-.26**	-.08	-.02	**-.16**

Note. *n* = 271-585. Statistically significant correlations are bolded, p < .05 (two-tailed).

Army-Wide Performance Criteria: Effort = Exhibits Effort & Professionalism Performance Rating Scale (PRS); Others = Works Effectively with Others PRS; PFit = Demonstrates Physical Fitness PRS. MOS-Specific Performance Criteria: PerRat = MOS-Specific Performance Ratings Composite; JKT = MOS-Specific Job Knowledge Test. Army-Wide Retention Criteria: ASat = Satisfaction with Army Scale; AFit = Perceived Army Fit Scale; Attrit = Attrition Cognitions Scale; CarInt = Career Intentions Scale. MOS-Specific Retention Criteria: MSat = Satisfaction with MOS Scale; MFit = Perceived MOS Fit Scale; PerCm = Perceived Competence Scale; MExp = MOS Exceeds Pre-Enlistment Expectations Scale.

Work Preferences Assessment (WPA)

Basic Descriptive Statistics (Means, SDs) and Reliability Estimates for the WPA

Table A2.1. Descriptive Statistics and Reliability Estimates for WPA Dimension and Facet Scores for the Full CV Sample

Scale	Items	*M*	*SD*	α
Realistic Interests	11	3.41	0.78	.92
Mechanical	5	3.22	1.03	.92
Physical	6	3.58	0.86	.89
Investigative Interests	12	3.30	0.63	.86
Critical Thinking	6	3.76	0.70	.84
Conduct Research	6	2.83	0.78	.80
Artistic Interests	12	2.87	0.73	.89
Artistic Activities	8	2.43	0.86	.89
Creativity	4	3.74	0.81	.83
Social Interests	7	3.59	0.63	.82
Work with Others	3	3.71	0.78	.68
Help Others	4	3.37	0.80	.73
Enterprising Interests	11	3.35	0.58	.84
Prestige	4	3.90	0.70	.68
Lead Others	3	3.70	0.77	.77
High Profile	4	2.59	0.86	.76
Conventional Interests	12	3.17	0.59	.80
Information Management	3	2.66	0.81	.83
Detail Orientation	3	3.81	0.76	.74
Clear Procedures	6	3.80	0.74	.62

Note. n = 602. Items = number of items comprising each final scale. α = internal consistency reliability estimates.

Basic Descriptive Statistics (Means, SDs) and Reliability Estimates for the WPA (cont'd)

Table A2.2. Descriptive Statistics and Reliability Estimates for WPA Dimension and Facet Scores by MOS

	11B			19K			25U			63B			68W		
Scale	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α
Realistic Interests	3.50	0.69	.86	3.38	0.84	.94	3.05	0.68	.90	3.78	0.80	.94	3.06	0.77	.92
Mechanical	3.19	0.98	.92	3.27	0.98	.90	3.02	0.94	.91	3.90	0.99	.93	2.72	0.95	.91
Physical	3.77	0.84	.86	3.47	0.88	.89	3.12	0.78	.89	3.65	0.75	.86	3.37	0.86	.89
Investigative Interests	3.25	0.62	.84	3.24	0.60	.84	3.33	0.59	.87	3.30	0.73	.90	3.44	0.60	.86
Critical Thinking	3.77	0.71	.78	3.64	0.68	.83	3.70	0.68	.83	3.77	0.75	.86	3.88	0.65	.86
Conduct Research	2.74	0.79	.82	2.84	0.69	.74	2.95	0.72	.79	2.83	0.87	.85	3.00	0.71	.75
Artistic Interests	2.80	0.74	.89	3.02	0.76	.89	2.93	0.72	.94	2.90	0.72	.88	2.84	0.71	.90
Artistic Activities	2.37	0.88	.88	2.58	0.88	.88	2.57	0.84	.93	2.44	0.88	.88	2.36	0.81	.89
Creativity	3.65	0.84	.80	3.90	0.74	.84	3.65	0.82	.85	3.83	0.71	.77	3.80	0.82	.88
Social Interests	3.51	0.64	.80	3.64	0.57	.81	3.53	0.66	.84	3.65	0.65	.85	3.78	0.60	.83
Work with Others	3.69	0.81	.70	3.78	0.69	.63	3.57	0.80	.62	3.80	0.77	.67	3.74	0.75	.70
Help Others	3.24	0.80	.67	3.35	0.76	.73	3.36	0.79	.73	3.36	0.82	.79	3.80	0.70	.68
Enterprising Interests	3.33	0.58	.82	3.46	0.55	.83	3.36	0.54	.82	3.39	0.65	.87	3.29	0.52	.82
Prestige	3.84	0.74	.66	3.98	0.59	.66	3.89	0.76	.61	4.00	0.68	.70	3.94	0.63	.69
Lead Others	3.75	0.83	.80	3.77	0.70	.77	3.61	0.69	.76	3.70	0.80	.78	3.55	0.67	.69
High Profile	2.52	0.89	.77	2.73	0.86	.77	2.75	0.89	.88	2.59	0.89	.75	2.52	0.71	.68
Conventional Interests	3.09	0.57	.69	3.21	0.54	.79	3.27	0.59	.51	3.32	0.68	.87	3.16	0.56	.81
Information Management	2.54	0.81	.79	2.73	0.76	.82	2.96	0.76	.76	2.77	0.89	.87	2.60	0.74	.82
Detail Orientation	3.81	0.77	.73	3.78	0.70	.68	3.56	0.75	.79	3.96	0.83	.79	3.88	0.68	.69
Clear Procedures	3.76	0.77	.54	3.79	0.65	.51	3.64	0.74	.52	4.00	0.75	.68	3.85	0.69	.69

Note. $n_{11B} = 267$. $n_{19K} = 86$. $n_{31U} = 67$. $n_{63B} = 90$. $n_{68W} = 92$. α = internal consistency reliability estimates.

Intercorrelations among WPA Scores

Table A2.3. Intercorrelations among WPA Dimension and Facet Scores in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	*Realistic Interests*	-																		
2	Mechanical	**.83**	-																	
3	Physical	**.81**	**.36**	-																
4	*Investigative Interests*	**.09**	**.10**	.07	-															
5	Critical Thinking	**.16**	**.10**	**.19**	**.84**	-														
6	Conduct Research	.00	.08	-.06	**.87**	**.46**	-													
7	*Artistic Interests*	.04	**.14**	-.05	**.40**	**.20**	**.47**	-												
8	Artistic Activities	.00	**.11**	**-.09**	**.30**	.06	**.44**	**.94**	-											
9	Creativity	**.10**	**.13**	.06	**.46**	**.43**	**.36**	**.71**	**.43**	-										
10	*Social Interests*	**.20**	**.08**	**.24**	**.48**	**.48**	**.35**	**.27**	**.19**	**.33**	-									
11	Work with Others	**.32**	**.14**	**.38**	**.29**	**.36**	**.14**	**.12**	.04	**.24**	**.78**	-								
12	Help Others	.04	.00	.07	**.47**	**.39**	**.41**	**.31**	**.27**	**.26**	**.85**	**.42**	-							
13	*Enterprising Interests*	**.13**	.06	**.18**	**.55**	**.52**	**.43**	**.34**	**.26**	**.39**	**.57**	**.46**	**.45**	-						
14	Prestige	**.10**	-.01	**.18**	**.39**	**.47**	**.21**	**.11**	.00	**.32**	**.47**	**.43**	**.34**	**.75**	-					
15	Lead Others	**.29**	**.09**	**.40**	**.31**	**.43**	**.12**	.07	-.02	**.23**	**.55**	**.53**	**.36**	**.70**	**.52**	-				
16	High Profile	-.07	.02	**-.11**	**.42**	**.21**	**.49**	**.45**	**.47**	**.23**	**.30**	**.15**	**.32**	**.73**	**.25**	**.22**	-			
17	*Conventional Interests*	**.17**	**.20**	**.10**	**.54**	**.49**	**.44**	**.21**	**.19**	**.17**	**.51**	**.37**	**.44**	**.59**	**.42**	**.41**	**.46**	-		
18	Information Management	-.04	**.10**	**-.14**	**.47**	**.27**	**.51**	**.39**	**.42**	**.16**	**.32**	**.14**	**.35**	**.50**	**.18**	**.20**	**.65**	**.82**	-	
19	Detail Orientation	**.34**	**.23**	**.34**	**.42**	**.57**	**.18**	**-.09**	**-.19**	**.18**	**.44**	**.43**	**.28**	**.39**	**.45**	**.43**	.03	**.63**	**.18**	-
20	Clear Procedures	**.30**	**.22**	**.30**	**.35**	**.48**	**.13**	**-.09**	**-.17**	**.13**	**.46**	**.42**	**.32**	**.37**	**.46**	**.41**	.02	**.67**	**.20**	**.87**

Note. n = 602. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WPA Scores (cont'd)

Table A2.4. Intercorrelations among WPA Dimension and Facet Scores for 11B in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	*Realistic Interests*	-																		
2	Mechanical	**.75**	-																	
3	Physical	**.75**	**.15**	-																
4	*Investigative Interests*	**.13**	**.16**	.07	-															
5	Critical Thinking	**.23**	**.12**	**.25**	**.80**	-														
6	Conduct Research	.01	**.15**	-.12	**.85**	**.36**	-													
7	*Artistic Interests*	.02	**.20**	**-.15**	**.49**	**.27**	**.53**	-												
8	Artistic Activities	-.03	**.18**	**-.21**	**.38**	.09	**.51**	**.94**	-											
9	Creativity	.12	**.14**	.05	**.50**	**.52**	**.32**	**.68**	**.38**	-										
10	*Social Interests*	**.21**	.08	**.23**	**.48**	**.48**	**.32**	**.31**	**.20**	**.39**	-									
11	Work with Others	**.32**	.07	**.40**	**.26**	**.36**	.08	.10	.00	**.27**	**.77**	-								
12	Help Others	.10	.10	.05	**.44**	**.36**	**.37**	**.37**	**.32**	**.30**	**.84**	**.39**	-							
13	*Enterprising Interests*	.06	.00	.10	**.58**	**.51**	**.44**	**.34**	**.24**	**.40**	**.60**	**.46**	**.45**	-						
14	Prestige	.10	-.04	**.18**	**.38**	**.46**	**.18**	**.13**	.00	**.35**	**.46**	**.41**	**.33**	**.75**	-					
15	Lead Others	**.23**	-.03	**.38**	**.33**	**.47**	.10	.06	-.06	**.30**	**.57**	**.56**	**.33**	**.67**	**.51**	-				
16	High Profile	**-.16**	.03	**-.25**	**.44**	**.15**	**.56**	**.42**	**.45**	**.15**	**.29**	.10	**.31**	**.69**	**.22**	.12	-			
17	*Conventional Interests*	**.16**	**.17**	.08	**.50**	**.40**	**.42**	**.17**	**.16**	.11	**.48**	**.31**	**.44**	**.58**	**.38**	**.34**	**.49**	-		
18	Information Management	-.11	.11	**-.23**	**.45**	**.17**	**.55**	**.33**	**.39**	.06	**.28**	.06	**.33**	**.47**	.10	.09	**.71**	**.79**	-	
19	Detail Orientation	**.35**	**.16**	**.38**	**.36**	**.52**	.10	-.09	**-.20**	**.19**	**.41**	**.40**	**.25**	**.40**	**.43**	**.45**	.01	**.60**	.11	-
20	Clear Procedures	**.34**	**.16**	**.36**	**.28**	**.44**	.05	-.07	**-.17**	**.16**	**.42**	**.38**	**.32**	**.36**	**.44**	**.39**	.00	**.66**	**.12**	**.85**

Note. $n = 267$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WPA Scores (cont'd)

Table A1.5. Intercorrelations among WPA Dimension and Facet Scores for 19K in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	*Realistic Interests*	-																		
2	Mechanical	**.91**	-																	
3	Physical	**.91**	**.67**	-																
4	*Investigative Interests*	-.02	-.03	.00	-															
5	Critical Thinking	.03	-.04	.08	**.87**	-														
6	Conduct Research	-.07	-.02	-.09	**.87**	**.51**	-													
7	*Artistic Interests*	-.08	-.01	-.08	**.38**	.14	**.52**	-												
8	Artistic Activities	-.04	.02	-.05	**.35**	.10	**.50**	**.96**	-											
9	Creativity	-.14	-.08	-.13	**.35**	.21	**.40**	**.77**	**.58**	-										
10	*Social Interests*	.19	.04	**.30**	**.28**	**.35**	.14	.16	.15	.14	-									
11	Work with Others	**.35**	.20	**.43**	.06	.18	-.08	-.01	-.05	.09	**.75**	-								
12	Help Others	-.02	-.11	.09	**.38**	**.31**	**.34**	**.39**	**.40**	**.23**	**.85**	**.40**	-							
13	*Enterprising Interests*	.01	-.07	.10	**.38**	**.50**	.17	**.30**	**.25**	**.31**	**.48**	**.31**	**.37**	-						
14	Prestige	.00	-.11	.14	.18	**.37**	-.06	.03	-.06	**.24**	**.36**	**.32**	.15	**.77**	-					
15	Lead Others	**.26**	.08	**.37**	.14	**.34**	-.09	-.13	-.12	-.10	**.55**	**.53**	**.27**	**.76**	**.64**	-				
16	High Profile	-.21	-.15	-.21	**.39**	**.33**	**.34**	**.56**	**.55**	**.42**	**.30**	.05	**.41**	**.79**	**.33**	**.36**	-			
17	*Conventional Interests*	.03	.03	.05	**.56**	**.59**	**.39**	.16	.15	.14	**.49**	**.22**	**.42**	**.58**	**.38**	**.50**	**.47**	-		
18	Information Management	**-.26**	-.17	**-.29**	**.53**	**.38**	**.54**	**.44**	**.45**	**.29**	**.23**	-.06	**.35**	**.46**	.14	.19	**.62**	**.82**	-	
19	Detail Orientation	**.32**	**.24**	**.34**	**.38**	**.58**	.08	**-.27**	**-.31**	-.08	**.38**	**.33**	.14	**.36**	**.39**	**.46**	.01	**.63**	.17	-
20	Clear Procedures	**.32**	**.23**	**.35**	**.28**	**.43**	.06	**-.22**	**-.24**	-.11	**.42**	**.31**	.21	**.36**	**.42**	**.51**	.01	**.68**	**.24**	**.84**

Note. $n = 86$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WPA Scores (cont'd)

Table A1.6. Intercorrelations among WPA Dimension and Facet Scores for 25U in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	*Realistic Interests*	-																		
2	Mechanical	**.78**	-																	
3	Physical	**.75**	.20	-																
4	*Investigative Interests*	**.25**	**.26**	.13	-															
5	Critical Thinking	.15	.16	.09	**.84**	-														
6	Conduct Research	**.27**	**.28**	.13	**.86**	**.44**	-													
7	*Artistic Interests*	.03	.07	.04	.20	.03	**.29**	-												
8	Artistic Activities	-.02	.03	-.03	.05	-.13	.20	**.94**	-											
9	Creativity	.14	.13	.16	**.42**	**.36**	**.36**	**.71**	**.43**	-										
10	*Social Interests*	.20	.14	.13	**.51**	**.50**	**.37**	.21	.13	**.28**	-									
11	Work with Others	**.37**	.24	**.32**	**.43**	**.38**	**.35**	.21	.09	**.37**	**.78**	-								
12	Help Others	.00	.02	-.05	**.43**	**.45**	**.29**	.15	.13	.13	**.85**	**.41**	-							
13	*Enterprising Interests*	**.26**	.10	**.35**	**.56**	**.59**	**.37**	**.36**	**.24**	**.46**	**.55**	**.48**	**.43**	-						
14	Prestige	**.25**	.09	**.31**	**.46**	**.57**	.23	.13	-.04	**.43**	**.39**	**.42**	.21	**.73**	-					
15	Lead Others	**.26**	.17	.23	**.33**	**.53**	.05	-.04	-.09	.08	**.48**	**.33**	**.47**	**.56**	**.35**	-				
16	High Profile	.03	-.05	.13	**.27**	.11	**.35**	**.47**	**.48**	**.27**	**.26**	**.24**	**.24**	**.66**	.11	.07	-			
17	*Conventional Interests*	**.25**	.24	.14	**.47**	**.61**	.20	.12	.11	.11	**.49**	**.41**	**.40**	**.60**	**.52**	**.55**	**.26**	-		
18	Information Management	.12	.17	.01	**.27**	**.34**	.13	.24	**.30**	.02	**.35**	.20	**.37**	**.46**	.18	**.43**	**.41**	**.85**	-	
19	Detail Orientation	**.30**	.18	**.28**	**.59**	**.71**	**.31**	.00	-.11	.22	**.46**	**.49**	**.29**	**.56**	**.65**	**.41**	.09	**.72**	**.31**	-
20	Clear Procedures	.20	.17	.16	**.51**	**.65**	.23	.03	-.10	**.27**	**.48**	**.49**	**.30**	**.50**	**.64**	**.41**	.02	**.69**	**.27**	**.88**

Note. $n = 67$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WPA Scores (cont'd)

Table A1.7. Intercorrelations among WPA Dimension and Facet Scores for 63B in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	*Realistic Interests*	-																		
2	Mechanical	**.93**	-																	
3	Physical	**.88**	**.66**	-																
4	*Investigative Interests*	.15	.10	**.24**	-															
5	Critical Thinking	**.25**	**.24**	**.26**	**.89**	-														
6	Conduct Research	.04	-.04	.18	**.92**	**.63**	-													
7	*Artistic Interests*	.05	-.03	.17	**.51**	**.32**	**.58**	-												
8	Artistic Activities	.04	-.05	.19	**.41**	.20	**.52**	**.96**	-											
9	Creativity	.03	.03	.05	**.54**	**.49**	**.48**	**.68**	**.44**	-										
10	*Social Interests*	**.32**	.19	**.45**	**.65**	**.59**	**.59**	**.40**	**.34**	**.37**	-									
11	Work with Others	**.43**	**.26**	**.55**	**.39**	**.39**	**.32**	**.24**	**.22**	.18	**.80**	-								
12	Help Others	.17	.06	**.30**	**.69**	**.57**	**.66**	**.40**	**.35**	**.36**	**.90**	**.54**	-							
13	*Enterprising Interests*	**.26**	.11	**.41**	**.68**	**.57**	**.66**	**.50**	**.46**	**.39**	**.71**	**.56**	**.68**	-						
14	Prestige	**.23**	.12	**.31**	**.55**	**.53**	**.46**	**.24**	.17	**.29**	**.63**	**.52**	**.58**	**.79**	-					
15	Lead Others	**.43**	**.26**	**.58**	**.46**	**.42**	**.41**	**.33**	**.27**	**.33**	**.69**	**.62**	**.61**	**.82**	**.64**	-				
16	High Profile	.08	-.02	.21	**.60**	**.41**	**.65**	**.56**	**.57**	**.28**	**.50**	**.31**	**.54**	**.81**	**.40**	**.48**	-			
17	*Conventional Interests*	**.31**	**.24**	**.36**	**.73**	**.66**	**.66**	**.43**	**.39**	**.36**	**.75**	**.62**	**.71**	**.68**	**.55**	**.56**	**.56**	-		
18	Information Management	.09	.02	.20	**.66**	**.51**	**.67**	**.55**	**.56**	**.30**	**.60**	**.42**	**.65**	**.61**	**.38**	**.42**	**.68**	**.88**	-	
19	Detail Orientation	**.47**	**.47**	**.37**	**.51**	**.59**	**.35**	.05	-.05	**.28**	**.61**	**.57**	**.48**	**.40**	**.50**	**.43**	.12	**.68**	**.31**	-
20	Clear Procedures	**.44**	**.42**	**.38**	**.47**	**.54**	**.33**	.02	-.07	**.23**	**.65**	**.63**	**.52**	**.47**	**.54**	**.52**	.16	**.73**	**.36**	**.91**

Note. $n = 90$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WPA Scores (cont'd)

Table A1.8. Intercorrelations among WPA Dimension and Facet Scores for 68W in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	*Realistic Interests*	-																		
2	Mechanical	**.87**	-																	
3	Physical	**.86**	**.50**	-																
4	*Investigative Interests*	.07	.10	.07	-															
5	Critical Thinking	.10	.07	.13	**.87**	-														
6	Conduct Research	.03	.11	-.01	**.89**	**.54**	-													
7	*Artistic Interests*	**.25**	**.34**	.10	**.21**	.10	**.26**	-												
8	Artistic Activities	.15	**.26**	.00	.08	-.05	.18	**.94**	-											
9	Creativity	**.34**	**.37**	**.25**	**.38**	**.36**	**.31**	**.74**	**.47**	-										
10	*Social Interests*	**.25**	.10	**.33**	**.38**	**.44**	**.24**	.15	.08	**.21**	-									
11	Work with Others	.17	.05	**.23**	**.35**	**.46**	.17	.09	.03	.17	**.84**	-								
12	Help Others	.19	.04	**.30**	**.34**	**.30**	**.31**	.12	.08	.14	**.84**	**.50**	-							
13	*Enterprising Interests*	**.21**	.15	**.24**	**.50**	**.52**	**.37**	.18	.05	**.36**	**.51**	**.52**	**.40**	-						
14	Prestige	-.02	-.13	.11	**.35**	**.44**	.19	-.07	-.18	.15	**.48**	**.50**	**.39**	**.73**	-					
15	Lead Others	**.34**	**.22**	**.39**	**.30**	**.39**	.16	.08	-.07	**.35**	**.53**	**.46**	**.45**	**.74**	**.51**	-				
16	High Profile	.19	**.24**	.10	**.31**	**.23**	**.32**	**.26**	**.22**	**.23**	.20	**.22**	.14	**.73**	.19	**.33**	-			
17	*Conventional Interests*	.19	**.26**	.09	**.48**	**.43**	**.42**	.15	.11	.17	**.39**	**.41**	**.22**	**.53**	**.36**	**.38**	**.38**	-		
18	Information Management	**.22**	**.36**	.05	**.37**	**.22**	**.42**	**.42**	**.38**	**.33**	**.24**	**.24**	.13	**.54**	**.22**	**.26**	**.60**	**.83**	-	
19	Detail Orientation	.17	.15	.17	**.46**	**.57**	**.26**	-.11	**-.24**	.18	**.38**	**.37**	**.24**	**.30**	**.35**	**.40**	-.01	**.66**	**.24**	-
20	Clear Procedures	.09	.08	.10	**.35**	**.44**	.18	**-.22**	**-.28**	-.02	**.41**	**.37**	**.25**	**.22**	**.28**	**.30**	-.02	**.65**	.20	**.88**

Note. $n = 92$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Correlations between WPA Dimension and Facet Scores and Criteria

Table A2.9. Correlations between WPA Dimension and Facet Scores and Criteria for the Full CV Sample

	Criterion Type/Scale												
	Performance Criteria					Retention Criteria							
	Army-Wide			*MOS-Specific*		*Army-Wide*				*MOS-Specific*			
Scale	Effort	Others	PFit	PerRat	JKT	ASat	AFit	Attrit	CarInt	MSat	MFit	PerCm	MExp
Realistic Interests	.07	.05	**.16**	**.13**	.03	**.23**	**.26**	**-.18**	**.20**	**.29**	**.27**	**.17**	**.24**
Mechanical	-.01	.03	.05	.05	.05	**.15**	**.15**	-.05	**.10**	**.24**	**.20**	.01	**.16**
Physical	**.14**	.06	**.23**	**.18**	.00	**.24**	**.28**	**-.25**	**.23**	**.23**	**.27**	**.30**	**.26**
Investigative Interests	-.04	.06	.02	.02	**.09**	**.14**	**.16**	**-.10**	**.16**	**.10**	.07	**.18**	.07
Critical Thinking	.02	.08	.04	.05	**.19**	**.16**	**.22**	**-.16**	**.18**	**.11**	**.14**	**.26**	**.11**
Conduct Research	-.07	.03	.00	-.02	-.03	.08	.06	-.02	**.10**	.07	.01	.07	.02
Artistic Interests	-.09	.02	-.08	-.06	-.06	-.01	-.06	**.11**	.02	-.01	-.05	-.08	-.01
Artistic Activities	-.08	.01	**-.10**	-.06	**-.12**	-.03	-.08	**.13**	.02	-.02	-.07	**-.13**	-.01
Creativity	-.09	.03	-.01	-.03	.08	.02	.01	.04	.03	-.01	.01	.07	.00
Social Interests	.05	.07	.05	.01	-.05	**.25**	**.29**	**-.18**	**.22**	**.19**	**.22**	**.26**	**.30**
Work with Others	.00	-.01	.06	.02	-.02	**.26**	**.31**	**-.23**	**.24**	**.24**	**.21**	**.30**	**.32**
Help Others	.08	.09	-.01	-.02	-.06	**.14**	**.17**	-.07	**.14**	**.09**	**.11**	**.12**	**.16**
Enterprising Interests	.04	.08	.08	.07	-.07	**.13**	**.20**	**-.11**	**.18**	**.23**	.04	**.18**	**.16**
Prestige	.03	.08	.09	**.09**	.04	**.12**	**.20**	**-.17**	**.15**	**.17**	.08	**.22**	**.13**
Lead Others	.08	.04	.05	**.09**	.00	**.18**	**.29**	**-.18**	**.24**	**.22**	**.14**	**.30**	**.21**
High Profile	-.01	.05	.03	-.02	**-.16**	.03	.02	.06	.05	**.13**	-.07	-.03	.07
Conventional Interests	.09	**.14**	.06	.07	-.07	**.25**	**.26**	**-.14**	**.21**	**.29**	.07	**.13**	**.18**
Information Management	.01	.08	-.02	.01	**-.12**	**.10**	.06	.01	.08	**.17**	-.07	-.03	.04
Detail Orientation	**.12**	**.13**	**.16**	**.10**	.06	**.26**	**.30**	**-.21**	**.20**	**.25**	**.17**	**.30**	**.19**
Clear Procedures	.10	.11	**.13**	.08	.02	**.24**	**.29**	**-.20**	**.21**	**.22**	**.15**	**.22**	**.20**

Note. *n* = 310-581. Statistically significant correlations are bolded, p < .05 (two-tailed).

Army-Wide Performance Criteria: Effort = Exhibits Effort & Professionalism Performance Rating Scale (PRS); Others = Works Effectively with Others PRS; PFit = Demonstrates Physical Fitness PRS. MOS-Specific Performance Criteria: PerRat = MOS-Specific Performance Ratings Composite; JKT = MOS-Specific Job Knowledge Test. Army-Wide Retention Criteria: ASat = Satisfaction with Army Scale; AFit = Perceived Army Fit Scale; Attrit = Attrition Cognitions Scale; CarInt = Career Intentions Scale. MOS-Specific Retention Criteria: MSat = Satisfaction with MOS Scale; MFit = Perceived MOS Fit Scale; PerCm = Perceived Competence Scale; MExp = MOS Exceeds Pre-Enlistment Expectations Scale.

Work Values Inventory (WVI)

Basic Descriptive Statistics (Means, SDs) for WVI

Table A3.1. Descriptive Statistics for WVI Scores in the Full CV Sample and by MOS

Score		Full CV Sample		11B		19K		25U		63B		68W	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	Social Status	0.45	1.30	0.43	1.33	0.30	1.39	0.60	1.07	0.30	1.39	0.68	1.17
2	Advancement	0.94	1.09	0.79	1.15	0.78	1.03	1.35	1.00	1.13	1.02	1.01	1.01
3	Autonomy	0.27	1.15	0.18	1.26	0.29	1.00	0.32	1.07	0.32	1.22	0.40	0.91
4	Supportive Supervision	0.14	1.30	0.01	1.35	0.01	1.26	0.45	1.25	0.33	1.35	0.22	1.12
5	Leisure Time	0.56	1.19	0.52	1.27	0.51	1.17	0.59	1.16	0.64	1.17	0.64	1.03
6	Comfort	0.66	1.24	0.55	1.33	0.72	1.21	0.77	1.28	0.88	1.11	0.61	1.07
7	Achievement	0.61	1.18	0.45	1.29	0.51	1.11	0.74	1.09	0.79	1.06	0.88	1.03
8	Societal Contribution	0.00	1.35	-0.08	1.44	-0.21	1.39	0.06	1.33	-0.04	1.19	0.44	1.17
9	Independence	-0.52	1.26	-0.57	1.34	-0.66	1.26	-0.56	1.02	-0.33	1.31	-0.43	1.11
10	Social Service	0.12	1.29	-0.04	1.33	-0.07	1.25	0.23	1.17	0.05	1.26	0.71	1.16
11	Fixed Role	0.05	1.19	0.04	1.30	-0.17	1.18	0.47	0.98	-0.08	1.07	0.08	1.09
12	Variety	0.01	1.17	-0.07	1.20	-0.06	1.24	0.09	1.01	0.18	1.25	0.09	1.03
13	Leadership Opportunities	0.21	1.28	0.21	1.30	0.07	1.35	0.40	1.28	0.25	1.34	0.14	1.12
14	Feedback	-0.15	1.08	-0.33	1.16	-0.24	1.14	0.17	0.85	0.11	1.07	-0.02	0.80
15	Travel	-1.01	1.34	-0.95	1.41	-1.13	1.37	-1.09	1.24	-1.16	1.31	-0.89	1.24
16	Physical Development	-0.14	1.25	0.00	1.29	-0.36	1.42	-0.37	1.25	-0.13	1.08	-0.17	1.10
17	Ability Utilization	0.41	1.10	0.29	1.17	0.27	1.13	0.63	0.91	0.38	1.12	0.72	0.88
18	Creativity	-0.10	1.11	-0.20	1.19	-0.13	1.13	0.09	0.94	-0.11	1.15	0.04	0.95
19	Recognition	-0.03	1.15	-0.17	1.22	-0.03	1.08	0.23	1.12	0.04	1.11	0.11	1.06
20	Co-workers	-0.15	1.12	-0.25	1.15	-0.01	1.17	0.00	1.14	-0.12	1.14	-0.13	0.94
21	Activity	-0.63	1.15	-0.80	1.20	-0.79	1.06	-0.59	1.09	-0.26	1.13	-0.39	1.01
22	Flexible Schedule	0.00	1.21	-0.03	1.29	0.12	1.27	-0.05	1.09	-0.09	1.18	0.11	0.98
23	Personal Development	0.10	1.07	0.01	1.10	-0.15	1.14	0.40	0.96	0.09	1.08	0.35	0.91
24	Home	-0.62	1.24	-0.70	1.26	-0.53	1.29	-0.57	1.10	-0.51	1.33	-0.60	1.19
25	Esteem	-0.36	1.15	-0.45	1.27	-0.42	1.04	-0.04	1.11	-0.43	1.18	-0.26	0.84
26	Emotional Development	-0.46	1.14	-0.44	1.24	-0.58	1.22	-0.37	0.92	-0.56	1.04	-0.40	1.03
27	Influence	-0.81	1.05	-0.74	1.14	-0.92	1.10	-0.80	0.90	-0.92	1.07	-0.83	0.82
28	Team Orientation	-0.55	1.13	-0.58	1.21	-0.56	1.18	-0.41	1.06	-0.61	1.07	-0.49	0.97

Note. . n = 563. n_{11B} = 250. n_{19K} = 80. n_{31U} = 69. n_{63B} = 82. n_{68W} = 87. Because of the partially ipsative nature of the WVI no internal consistency reliability estimates are provided for the WVI scales.

Intercorrelations among WVI Scores

Table A3.2. Intercorrelations among WVI Scores in the Full CV Sample

Score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1 Social Status	-																										
2 Advancement	**.61**	-																									
3 Autonomy	**.47**	**.50**	-																								
4 Supportive Supervision	**.50**	**.58**	**.33**	-																							
5 Leisure Time	**.44**	**.50**	**.55**	**.38**	-																						
6 Comfort	**.42**	**.46**	**.51**	**.44**	**.60**	-																					
7 Achievement	**.62**	**.66**	**.51**	**.57**	**.50**	**.50**	-																				
8 Societal Contribution	**.56**	**.49**	**.37**	**.47**	**.40**	**.33**	**.60**	-																			
9 Independence	**.29**	**.32**	**.59**	**.23**	**.46**	**.41**	**.37**	**.25**	-																		
10 Social Service	**.50**	**.46**	**.37**	**.53**	**.39**	**.36**	**.56**	**.72**	**.20**	-																	
11 Fixed Role	**.49**	**.57**	**.39**	**.60**	**.39**	**.35**	**.51**	**.49**	**.30**	**.48**	-																
12 Variety	**.49**	**.56**	**.52**	**.47**	**.51**	**.48**	**.55**	**.47**	**.43**	**.49**	**.46**	-															
13 Leadership Opportunities	**.54**	**.65**	**.41**	**.52**	**.34**	**.30**	**.55**	**.47**	**.20**	**.47**	**.54**	**.47**	-														
14 Feedback	**.55**	**.63**	**.49**	**.63**	**.48**	**.49**	**.69**	**.53**	**.39**	**.51**	**.57**	**.54**	**.59**	-													
15 Travel	**.32**	**.36**	**.38**	**.31**	**.29**	**.25**	**.36**	**.33**	**.31**	**.23**	**.28**	**.44**	**.35**	**.38**	-												
16 Physical Development	**.45**	**.48**	**.35**	**.44**	**.39**	**.18**	**.45**	**.45**	**.27**	**.42**	**.48**	**.47**	**.49**	**.45**	**.43**	-											
17 Ability Utilization	**.45**	**.55**	**.50**	**.50**	**.48**	**.44**	**.61**	**.50**	**.39**	**.48**	**.51**	**.54**	**.46**	**.61**	**.38**	**.46**	-										
18 Creativity	**.38**	**.42**	**.56**	**.31**	**.53**	**.54**	**.50**	**.34**	**.46**	**.33**	**.31**	**.50**	**.37**	**.52**	**.41**	**.32**	**.55**	-									
19 Recognition	**.58**	**.62**	**.44**	**.51**	**.48**	**.49**	**.63**	**.43**	**.35**	**.41**	**.47**	**.50**	**.50**	**.63**	**.30**	**.37**	**.50**	**.50**	-								
20 Co-workers	**.45**	**.48**	**.37**	**.51**	**.47**	**.49**	**.50**	**.44**	**.18**	**.49**	**.41**	**.47**	**.42**	**.51**	**.34**	**.42**	**.52**	**.42**	**.51**	-							
21 Activity	**.44**	**.47**	**.47**	**.46**	**.37**	**.35**	**.52**	**.44**	**.41**	**.44**	**.49**	**.58**	**.38**	**.56**	**.33**	**.43**	**.52**	**.38**	**.47**	**.45**	-						
22 Flexible Schedule	**.42**	**.49**	**.49**	**.39**	**.61**	**.58**	**.43**	**.32**	**.42**	**.33**	**.39**	**.55**	**.33**	**.49**	**.35**	**.36**	**.51**	**.52**	**.49**	**.51**	**.42**	-					
23 Personal Development	**.38**	**.49**	**.40**	**.49**	**.36**	**.35**	**.48**	**.40**	**.28**	**.44**	**.45**	**.49**	**.47**	**.51**	**.37**	**.46**	**.61**	**.48**	**.45**	**.47**	**.49**	**.46**	-				
24 Home	**.45**	**.48**	**.41**	**.40**	**.51**	**.45**	**.44**	**.43**	**.29**	**.44**	**.43**	**.40**	**.42**	**.46**	**.11**	**.32**	**.46**	**.40**	**.49**	**.53**	**.41**	**.52**	**.42**	-			
25 Esteem	**.52**	**.57**	**.44**	**.53**	**.45**	**.46**	**.58**	**.46**	**.29**	**.45**	**.50**	**.47**	**.49**	**.59**	**.31**	**.38**	**.55**	**.47**	**.62**	**.57**	**.46**	**.49**	**.55**	**.57**	-		
26 Emotional Development	**.45**	**.50**	**.35**	**.47**	**.33**	**.26**	**.45**	**.45**	**.25**	**.42**	**.52**	**.43**	**.51**	**.47**	**.35**	**.58**	**.50**	**.35**	**.43**	**.44**	**.51**	**.38**	**.62**	**.45**	**.54**	-	
27 Influence	**.48**	**.54**	**.49**	**.48**	**.42**	**.35**	**.49**	**.42**	**.36**	**.39**	**.54**	**.50**	**.60**	**.54**	**.41**	**.51**	**.54**	**.46**	**.50**	**.48**	**.53**	**.46**	**.57**	**.48**	**.57**	**.61**	-
28 Team Orientation	**.43**	**.47**	**.33**	**.51**	**.42**	**.40**	**.43**	**.44**	**.15**	**.52**	**.45**	**.46**	**.42**	**.48**	**.35**	**.41**	**.48**	**.35**	**.41**	**.66**	**.44**	**.47**	**.49**	**.46**	**.53**	**.48**	**.56**

Note. $n = 563$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WVI Scores (cont'd)

Table A3.3. Intercorrelations among WVI Scores for11B in the Full CV Sample

Score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1 Social Status	-																										
2 Advancement	**.64**	-																									
3 Autonomy	**.50**	**.56**	-																								
4 Supportive Supervision	**.54**	**.60**	**.41**	-																							
5 Leisure Time	**.53**	**.58**	**.63**	**.44**	-																						
6 Comfort	**.46**	**.50**	**.57**	**.42**	**.67**	-																					
7 Achievement	**.64**	**.71**	**.59**	**.56**	**.59**	**.55**	-																				
8 Societal Contribution	**.63**	**.51**	**.43**	**.52**	**.47**	**.36**	**.61**	-																			
9 Independence	**.34**	**.41**	**.61**	**.28**	**.53**	**.46**	**.46**	**.27**	-																		
10 Social Service	**.54**	**.48**	**.44**	**.55**	**.46**	**.38**	**.59**	**.72**	**.23**	-																	
11 Fixed Role	**.53**	**.59**	**.45**	**.66**	**.40**	**.35**	**.54**	**.55**	**.30**	**.50**	-																
12 Variety	**.53**	**.59**	**.59**	**.51**	**.59**	**.54**	**.59**	**.50**	**.46**	**.53**	**.47**	-															
13 Leadership Opportunities	**.56**	**.65**	**.48**	**.54**	**.37**	**.31**	**.61**	**.50**	**.26**	**.49**	**.58**	**.51**	-														
14 Feedback	**.59**	**.62**	**.55**	**.66**	**.50**	**.51**	**.71**	**.57**	**.45**	**.53**	**.59**	**.56**	**.61**	-													
15 Travel	**.33**	**.38**	**.48**	**.32**	**.32**	**.29**	**.39**	**.34**	**.37**	**.23**	**.30**	**.50**	**.40**	**.45**	-												
16 Physical Development	**.42**	**.45**	**.42**	**.47**	**.45**	**.21**	**.48**	**.50**	**.37**	**.45**	**.54**	**.50**	**.46**	**.49**	**.43**	-											
17 Ability Utilization	**.54**	**.56**	**.58**	**.47**	**.57**	**.48**	**.66**	**.55**	**.46**	**.52**	**.52**	**.57**	**.50**	**.65**	**.44**	**.55**	-										
18 Creativity	**.43**	**.45**	**.63**	**.34**	**.59**	**.61**	**.58**	**.38**	**.54**	**.40**	**.39**	**.56**	**.42**	**.58**	**.46**	**.36**	**.59**	-									
19 Recognition	**.64**	**.63**	**.47**	**.54**	**.54**	**.53**	**.69**	**.48**	**.43**	**.44**	**.47**	**.53**	**.51**	**.66**	**.34**	**.40**	**.56**	**.57**	-								
20 Co-workers	**.52**	**.52**	**.52**	**.53**	**.56**	**.49**	**.56**	**.49**	**.29**	**.50**	**.48**	**.55**	**.47**	**.57**	**.36**	**.44**	**.58**	**.50**	**.56**	-							
21 Activity	**.50**	**.52**	**.54**	**.48**	**.48**	**.40**	**.54**	**.45**	**.47**	**.44**	**.53**	**.60**	**.47**	**.59**	**.42**	**.52**	**.57**	**.48**	**.52**	**.52**	-						
22 Flexible Schedule	**.46**	**.56**	**.59**	**.41**	**.67**	**.63**	**.53**	**.37**	**.52**	**.38**	**.43**	**.59**	**.37**	**.54**	**.35**	**.39**	**.60**	**.61**	**.53**	**.60**	**.52**	-					
23 Personal Development	**.37**	**.48**	**.47**	**.48**	**.40**	**.39**	**.50**	**.42**	**.32**	**.48**	**.49**	**.51**	**.50**	**.53**	**.37**	**.50**	**.60**	**.48**	**.49**	**.54**	**.50**	**.49**	-				
24 Home	**.51**	**.48**	**.46**	**.41**	**.60**	**.49**	**.49**	**.49**	**.36**	**.49**	**.44**	**.50**	**.46**	**.49**	**.17**	**.35**	**.49**	**.46**	**.55**	**.59**	**.47**	**.59**	**.45**	-			
25 Esteem	**.59**	**.63**	**.54**	**.57**	**.51**	**.49**	**.66**	**.52**	**.39**	**.47**	**.55**	**.54**	**.56**	**.64**	**.41**	**.44**	**.57**	**.53**	**.68**	**.61**	**.56**	**.56**	**.61**	**.63**	-		
26 Emotional Development	**.48**	**.49**	**.39**	**.52**	**.42**	**.30**	**.47**	**.49**	**.23**	**.45**	**.59**	**.45**	**.56**	**.54**	**.41**	**.62**	**.52**	**.39**	**.50**	**.56**	**.57**	**.43**	**.63**	**.51**	**.63**	-	
27 Influence	**.46**	**.58**	**.53**	**.52**	**.45**	**.34**	**.51**	**.46**	**.40**	**.43**	**.57**	**.56**	**.64**	**.55**	**.45**	**.55**	**.56**	**.46**	**.53**	**.55**	**.63**	**.50**	**.63**	**.53**	**.64**	**.66**	-
28 Team Orientation	**.44**	**.51**	**.43**	**.53**	**.47**	**.41**	**.45**	**.50**	**.23**	**.53**	**.49**	**.55**	**.49**	**.50**	**.37**	**.44**	**.52**	**.42**	**.43**	**.68**	**.52**	**.51**	**.52**	**.51**	**.57**	**.56**	**.64**

Note. $n = 257$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WVI Scores (cont'd)

Table A3.4. Intercorrelations among WVI Scores for 19K in the Full CV Sample

Score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1 Social Status	-																										
2 Advancement	**.60**	-																									
3 Autonomy	**.55**	**.41**	-																								
4 Supportive Supervision	**.47**	**.62**	**.32**	-																							
5 Leisure Time	**.47**	**.55**	**.57**	**.33**	-																						
6 Comfort	**.41**	**.47**	**.62**	**.38**	**.63**	-																					
7 Achievement	**.64**	**.60**	**.56**	**.66**	**.49**	**.51**	-																				
8 Societal Contribution	**.52**	**.52**	**.49**	**.57**	**.38**	**.46**	**.71**	-																			
9 Independence	**.35**	.22	**.58**	**.24**	**.42**	**.50**	**.49**	**.41**	-																		
10 Social Service	**.44**	**.40**	**.33**	**.50**	**.28**	**.40**	**.56**	**.76**	**.22**	-																	
11 Fixed Role	**.53**	**.71**	**.39**	**.63**	**.46**	**.38**	**.60**	**.64**	**.35**	**.65**	-																
12 Variety	**.53**	**.72**	**.50**	**.50**	**.52**	**.51**	**.59**	**.58**	**.46**	**.52**	**.67**	-															
13 Leadership Opportunities	**.54**	**.70**	**.34**	**.53**	**.36**	**.24**	**.50**	**.49**	.17	**.47**	**.66**	**.52**	-														
14 Feedback	**.64**	**.70**	**.56**	**.57**	**.51**	**.48**	**.68**	**.52**	**.36**	**.48**	**.63**	**.62**	**.61**	-													
15 Travel	**.27**	**.43**	.20	**.38**	**.32**	**.26**	**.43**	**.27**	**.29**	.16	**.37**	**.38**	**.22**	**.32**	-												
16 Physical Development	**.55**	**.58**	**.33**	**.55**	**.37**	.22	**.54**	**.50**	.20	**.51**	**.61**	**.53**	**.53**	**.54**	**.50**	-											
17 Ability Utilization	**.40**	**.62**	**.47**	**.64**	**.43**	**.47**	**.68**	**.58**	**.40**	**.40**	**.60**	**.63**	**.47**	**.64**	**.44**	**.50**	-										
18 Creativity	**.28**	**.27**	**.48**	.21	**.57**	**.48**	**.43**	**.26**	**.37**	.16	.13	**.44**	.20	**.48**	**.37**	**.27**	**.50**	-									
19 Recognition	**.51**	**.61**	**.44**	**.55**	**.58**	**.43**	**.61**	**.50**	**.36**	**.42**	**.54**	**.60**	**.57**	**.61**	**.34**	**.55**	**.55**	**.43**	-								
20 Co-workers	**.38**	**.55**	.22	**.52**	**.37**	**.40**	**.58**	**.48**	.14	**.48**	**.39**	**.48**	**.48**	**.44**	**.36**	**.53**	**.52**	**.37**	**.54**	-							
21 Activity	**.48**	**.56**	**.39**	**.51**	**.38**	**.25**	**.70**	**.55**	**.44**	**.44**	**.58**	**.62**	**.44**	**.65**	**.39**	**.57**	**.61**	**.35**	**.60**	**.45**	-						
22 Flexible Schedule	**.41**	**.57**	**.51**	**.44**	**.62**	**.59**	**.43**	**.40**	**.46**	**.24**	**.46**	**.56**	**.33**	**.55**	**.35**	**.35**	**.48**	**.34**	**.54**	**.39**	**.40**	-					
23 Personal Development	**.44**	**.58**	**.43**	**.57**	**.42**	**.37**	**.54**	**.45**	**.36**	**.41**	**.57**	**.60**	**.55**	**.59**	**.48**	**.57**	**.71**	**.49**	**.64**	**.50**	**.57**	**.53**	-				
24 Home	**.45**	**.47**	**.28**	**.41**	**.40**	**.37**	**.47**	**.45**	**.36**	**.40**	**.46**	**.41**	**.42**	**.45**	.13	**.31**	**.41**	**.24**	**.51**	**.53**	**.46**	**.49**	**.53**	-			
25 Esteem	**.55**	**.49**	**.40**	**.46**	**.48**	**.43**	**.55**	**.50**	**.29**	**.49**	**.53**	**.40**	**.45**	**.58**	.11	**.43**	**.53**	**.37**	**.54**	**.50**	**.44**	**.47**	**.56**	**.59**	-		
26 Emotional Development	**.46**	**.62**	**.36**	**.65**	**.34**	**.30**	**.55**	**.54**	.16	**.48**	**.60**	**.51**	**.55**	**.45**	**.34**	**.65**	**.55**	**.29**	**.54**	**.51**	**.52**	**.37**	**.71**	**.48**	**.57**	-	
27 Influence	**.57**	**.54**	**.46**	**.50**	**.45**	**.34**	**.55**	**.41**	**.28**	**.40**	**.52**	**.50**	**.59**	**.56**	**.34**	**.57**	**.48**	**.40**	**.56**	**.51**	**.51**	**.41**	**.62**	**.51**	**.52**	**.62**	-
28 Team Orientation	**.50**	**.50**	**.25**	**.48**	**.31**	**.33**	**.46**	**.42**	.11	**.50**	**.48**	**.42**	**.33**	**.47**	**.25**	**.44**	**.38**	.16	**.40**	**.59**	**.38**	**.30**	**.42**	**.46**	**.54**	**.43**	**.52**

Note. $n = 80$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WVI Scores (cont'd)

Table A3.5. Intercorrelations among WVI Scores for 25U in the Full CV Sample

Score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1 Social Status	-																										
2 Advancement	**.53**	-																									
3 Autonomy	**.39**	**.45**	-																								
4 Supportive Supervision	**.51**	**.56**	**.28**	-																							
5 Leisure Time	.21	**.25**	**.35**	**.32**	-																						
6 Comfort	**.36**	**.29**	**.36**	**.46**	**.49**	-																					
7 Achievement	**.49**	**.53**	**.39**	**.57**	**.37**	**.35**	-																				
8 Societal Contribution	**.52**	**.43**	.23	**.37**	**.32**	**.34**	**.57**	-																			
9 Independence	.13	.24	**.35**	.22	**.27**	**.28**	.15	.20	-																		
10 Social Service	**.57**	**.39**	**.38**	**.56**	**.32**	**.44**	**.46**	**.65**	**.24**	-																	
11 Fixed Role	**.35**	**.36**	.23	**.52**	**.36**	**.42**	**.35**	.20	.23	**.34**	-																
12 Variety	**.44**	**.46**	**.42**	**.32**	**.36**	**.37**	**.48**	**.45**	**.37**	**.48**	**.24**	-															
13 Leadership Opportunities	**.56**	**.73**	**.35**	**.55**	.20	**.29**	**.55**	**.49**	.14	**.58**	**.40**	**.42**	-														
14 Feedback	**.51**	**.50**	**.34**	**.62**	**.41**	**.44**	**.64**	**.52**	**.26**	**.49**	**.44**	**.45**	**.62**	-													
15 Travel	**.43**	**.41**	**.33**	**.38**	**.43**	**.31**	**.37**	**.49**	**.26**	**.48**	**.30**	**.51**	**.45**	**.39**	-												
16 Physical Development	**.52**	**.62**	**.41**	**.55**	**.44**	.23	**.48**	**.37**	.10	**.41**	**.36**	**.41**	**.57**	**.50**	**.44**	-											
17 Ability Utilization	**.27**	**.56**	**.44**	**.50**	**.37**	**.46**	**.48**	**.42**	**.34**	**.39**	**.43**	**.44**	**.41**	**.44**	**.36**	**.41**	-										
18 Creativity	**.38**	**.44**	**.46**	**.44**	**.44**	**.39**	**.46**	**.40**	**.39**	**.36**	**.25**	**.37**	**.42**	**.40**	**.35**	**.42**	**.53**	-									
19 Recognition	**.53**	**.56**	**.45**	**.38**	.14	**.30**	**.46**	**.36**	.20	**.29**	**.38**	**.34**	**.48**	**.41**	**.32**	**.40**	**.29**	**.29**	-								
20 Co-workers	**.36**	**.26**	**.27**	**.41**	**.45**	**.60**	**.37**	**.43**	.00	**.54**	**.38**	**.32**	**.33**	**.47**	**.34**	**.37**	**.47**	**.26**	**.28**	-							
21 Activity	**.39**	**.33**	**.27**	**.39**	**.25**	**.35**	**.43**	**.40**	.17	**.41**	**.39**	**.46**	.21	**.45**	.19	**.36**	**.37**	**.27**	**.36**	**.47**	-						
22 Flexible Schedule	**.46**	**.43**	**.36**	**.37**	**.50**	**.54**	**.25**	**.30**	.17	**.42**	**.34**	**.48**	**.32**	**.43**	**.45**	**.46**	**.52**	**.48**	**.38**	**.50**	**.40**	-					
23 Personal Development	**.39**	**.57**	**.28**	**.49**	.24	.21	**.45**	**.40**	.12	**.41**	**.28**	**.44**	**.53**	**.40**	**.25**	**.44**	**.62**	**.47**	**.27**	**.41**	**.45**	**.37**	-				
24 Home	**.36**	**.49**	**.38**	**.39**	**.34**	**.50**	**.36**	**.47**	.11	**.43**	**.48**	**.28**	**.46**	**.42**	.22	**.45**	**.60**	**.45**	**.39**	**.62**	**.44**	**.52**	**.49**	-			
25 Esteem	**.36**	**.49**	**.34**	**.42**	**.31**	**.37**	**.47**	**.50**	.06	**.38**	**.39**	**.34**	**.45**	**.50**	**.34**	**.37**	**.61**	**.45**	**.43**	**.46**	**.44**	**.46**	**.50**	**.63**	-		
26 Emotional Development	**.36**	**.41**	.11	**.40**	.17	.12	**.45**	**.46**	**.25**	**.47**	**.32**	**.42**	**.52**	**.45**	.17	**.43**	**.33**	**.42**	**.27**	**.27**	**.50**	**.36**	**.54**	**.43**	**.39**	-	
27 Influence	**.41**	**.53**	**.38**	**.47**	**.29**	**.40**	**.48**	**.48**	**.27**	**.47**	**.44**	**.46**	**.48**	**.52**	**.35**	**.47**	**.61**	**.39**	**.39**	**.44**	**.51**	**.43**	**.52**	**.54**	**.55**	**.53**	-
28 Team Orientation	**.49**	**.38**	**.34**	**.49**	**.49**	**.53**	**.32**	**.46**	-.04	**.60**	**.42**	**.34**	**.36**	**.46**	**.38**	**.48**	**.47**	**.31**	**.38**	**.72**	**.48**	**.67**	**.47**	**.61**	**.48**	**.37**	**.55**

Note. $n = 69$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WVI Scores (cont'd)

Table A3.6. Intercorrelations among WVI Scores for 63B in the Full CV Sample

Score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1 Social Status	-																										
2 Advancement	**.63**	-																									
3 Autonomy	**.42**	**.53**	-																								
4 Supportive Supervision	**.49**	**.63**	**.23**	-																							
5 Leisure Time	**.37**	**.61**	**.54**	**.37**	-																						
6 Comfort	**.43**	**.62**	**.44**	**.55**	**.50**	-																					
7 Achievement	**.68**	**.70**	**.38**	**.53**	**.47**	**.46**	-																				
8 Societal Contribution	**.56**	**.58**	**.27**	**.51**	**.46**	**.32**	**.59**	-																			
9 Independence	**.25**	**.32**	**.66**	.11	**.47**	**.29**	**.26**	.18	-																		
10 Social Service	**.53**	**.63**	**.27**	**.58**	**.44**	**.43**	**.54**	**.75**	.18	-																	
11 Fixed Role	**.43**	**.65**	**.35**	**.55**	**.47**	**.42**	**.48**	**.48**	**.30**	**.51**	-																
12 Variety	**.50**	**.62**	**.50**	**.43**	**.52**	**.47**	**.52**	**.46**	**.44**	**.48**	**.59**	-															
13 Leadership Opportunities	**.52**	**.63**	**.37**	**.61**	**.40**	**.41**	**.54**	**.54**	.19	**.58**	**.62**	**.41**	-														
14 Feedback	**.53**	**.73**	**.40**	**.63**	**.53**	**.56**	**.68**	**.60**	**.31**	**.68**	**.64**	**.58**	**.68**	-													
15 Travel	**.33**	**.50**	**.52**	**.27**	**.28**	**.32**	**.41**	**.37**	**.31**	**.37**	**.34**	**.44**	**.44**	**.50**	-												
16 Physical Development	**.51**	**.58**	**.37**	**.41**	**.42**	**.27**	**.51**	**.50**	**.33**	**.52**	**.55**	**.42**	**.59**	**.52**	**.48**	-											
17 Ability Utilization	**.34**	**.57**	**.41**	**.45**	**.46**	**.44**	**.53**	**.40**	**.36**	**.60**	**.44**	**.49**	**.51**	**.60**	**.35**	**.41**	-										
18 Creativity	**.34**	**.56**	**.52**	**.30**	**.53**	**.57**	**.41**	**.33**	**.34**	**.41**	**.41**	**.52**	**.44**	**.50**	**.50**	**.38**	**.58**	-									
19 Recognition	**.57**	**.70**	**.38**	**.51**	**.48**	**.52**	**.57**	**.47**	**.22**	**.57**	**.56**	**.53**	**.56**	**.72**	**.37**	**.34**	**.42**	**.47**	-								
20 Co-workers	**.43**	**.58**	**.37**	**.54**	**.46**	**.63**	**.47**	**.38**	**.31**	**.58**	**.41**	**.49**	**.41**	**.57**	**.46**	**.41**	**.55**	**.53**	**.63**	-							
21 Activity	**.47**	**.52**	**.61**	**.41**	**.37**	**.39**	**.51**	**.40**	**.49**	**.44**	**.48**	**.62**	**.38**	**.53**	**.32**	**.30**	**.46**	**.43**	**.51**	**.37**	-						
22 Flexible Schedule	**.40**	**.51**	**.45**	**.35**	**.57**	**.51**	**.35**	**.33**	**.38**	**.31**	**.44**	**.61**	**.39**	**.50**	**.47**	**.38**	**.40**	**.58**	**.47**	**.51**	**.45**	-					
23 Personal Development	**.35**	**.51**	**.39**	**.47**	**.35**	**.50**	**.41**	**.30**	**.33**	**.44**	**.42**	**.46**	**.44**	**.49**	**.46**	**.47**	**.57**	**.53**	**.33**	**.41**	**.41**	**.50**	-				
24 Home	**.38**	**.55**	**.46**	**.42**	**.56**	**.47**	**.41**	**.40**	**.25**	**.53**	**.47**	**.37**	**.49**	**.51**	.19	**.38**	**.50**	**.52**	**.52**	**.44**	**.39**	**.49**	**.42**	-			
25 Esteem	**.46**	**.64**	**.35**	**.52**	**.43**	**.59**	**.52**	**.32**	**.30**	**.53**	**.53**	**.51**	**.47**	**.60**	**.30**	**.30**	**.53**	**.54**	**.69**	**.61**	**.39**	**.43**	**.59**	**.55**	-		
26 Emotional Development	**.39**	**.59**	**.47**	**.39**	**.26**	**.44**	**.47**	**.28**	**.45**	**.41**	**.45**	**.42**	**.37**	**.45**	**.44**	**.50**	**.54**	**.42**	**.38**	**.27**	**.46**	**.39**	**.70**	**.43**	**.58**	-	
27 Influence	**.51**	**.63**	**.51**	**.48**	**.42**	**.52**	**.54**	**.42**	**.36**	**.45**	**.68**	**.51**	**.64**	**.66**	**.51**	**.51**	**.54**	**.65**	**.59**	**.51**	**.51**	**.48**	**.53**	**.50**	**.57**	**.56**	-
28 Team Orientation	**.41**	**.61**	**.32**	**.50**	**.43**	**.55**	**.47**	**.37**	.19	**.56**	**.42**	**.42**	**.41**	**.48**	**.48**	**.40**	**.48**	**.44**	**.51**	**.67**	**.31**	**.51**	**.41**	**.37**	**.47**	**.39**	**.41**

Note. n = x-x. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WVI Scores (cont'd)

Table A3.7. Intercorrelations among WVI Scores for 68W in the Full CV Sample

Score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1 Social Status	-																										
2 Advancement	**.61**	-																									
3 Autonomy	**.39**	**.33**	-																								
4 Supportive Supervision	**.41**	**.35**	.13	-																							
5 Leisure Time	**.35**	**.25**	**.32**	**.22**	-																						
6 Comfort	**.38**	**.28**	**.32**	**.45**	**.51**	-																					
7 Achievement	**.60**	**.55**	**.34**	**.52**	**.29**	**.41**	-																				
8 Societal Contribution	**.36**	**.35**	**.22**	**.23**	.14	.12	**.46**	-																			
9 Independence	.19	.11	**.63**	.14	**.31**	**.29**	.14	.05	-																		
10 Social Service	**.30**	**.33**	.17	**.39**	**.24**	.17	**.51**	**.62**	.03	-																	
11 Fixed Role	**.43**	**.37**	**.30**	**.50**	**.22**	**.27**	**.47**	**.31**	**.32**	**.36**	-																
12 Variety	**.34**	**.29**	**.34**	**.39**	**.33**	**.29**	**.45**	**.23**	**.26**	**.33**	.20	-															
13 Leadership Opportunities	**.47**	**.55**	**.35**	**.23**	**.24**	**.23**	**.42**	**.27**	.06	**.27**	**.27**	**.34**	-														
14 Feedback	**.36**	**.50**	**.36**	**.57**	**.34**	**.39**	**.59**	**.28**	**.28**	**.28**	**.49**	**.32**	**.39**	-													
15 Travel	**.26**	.14	.01	**.22**	.02	.04	.19	**.22**	.12	-.01	.07	**.27**	.15	.12	-												
16 Physical Development	**.37**	**.41**	.08	**.27**	.13	-.06	**.33**	**.28**	.05	**.25**	**.21**	**.46**	**.42**	**.27**	**.30**	-											
17 Ability Utilization	**.41**	**.38**	**.28**	**.49**	**.26**	**.28**	**.45**	**.26**	.17	**.24**	**.44**	**.42**	**.32**	**.47**	.14	**.30**	-										
18 Creativity	**.29**	**.22**	**.44**	.16	**.26**	**.38**	**.36**	.16	**.43**	.04	.12	**.38**	**.23**	**.35**	**.24**	.17	**.37**	-									
19 Recognition	**.49**	**.54**	**.38**	**.44**	**.43**	**.54**	**.60**	.15	**.25**	.21	**.34**	**.35**	**.36**	**.54**	.10	**.22**	**.39**	**.45**	-								
20 Co-workers	**.39**	**.34**	-.07	**.41**	**.29**	**.26**	**.31**	**.30**	**-.23**	**.36**	**.26**	**.24**	**.23**	**.26**	.15	**.39**	**.32**	.10	**.31**	-							
21 Activity	.20	.19	.15	**.40**	.04	.13	**.28**	**.34**	.14	**.38**	**.40**	**.49**	.16	**.31**	.14	**.27**	**.39**	.02	.15	**.26**	-						
22 Flexible Schedule	**.25**	**.22**	.17	**.41**	**.45**	**.49**	**.30**	-.05	**.22**	.16	.20	**.42**	.17	**.27**	.08	.12	**.31**	**.35**	**.39**	**.23**	.14	-					
23 Personal Development	**.33**	**.26**	.11	**.36**	.19	.18	**.35**	**.31**	.06	**.26**	**.22**	**.38**	.17	**.36**	**.30**	**.31**	**.49**	**.33**	**.30**	**.29**	**.44**	**.35**	-				
24 Home	**.39**	**.41**	**.31**	**.34**	**.36**	**.33**	**.31**	.20	.14	**.31**	**.39**	.12	.16	**.34**	**-.25**	.12	**.33**	.19	**.29**	**.35**	.11	**.32**	.18	-			
25 Esteem	**.39**	**.31**	.13	**.48**	**.34**	**.30**	**.40**	.21	-.06	**.23**	**.31**	**.26**	**.28**	**.37**	.08	**.26**	**.41**	.13	**.52**	**.53**	.15	**.30**	**.23**	**.32**	-		
26 Emotional Development	**.40**	**.49**	**.22**	**.24**	.18	.02	**.28**	**.33**	.19	.20	**.34**	**.30**	**.45**	**.33**	.20	**.56**	**.39**	.12	**.26**	**.27**	**.45**	.17	**.45**	**.27**	.19	-	
27 Influence	**.47**	**.43**	**.47**	**.34**	**.35**	**.26**	**.34**	**.26**	**.42**	.14	**.38**	**.31**	**.55**	**.43**	**.26**	**.26**	**.53**	**.39**	**.37**	.20	**.26**	**.30**	**.40**	**.23**	**.27**	**.46**	-
28 Team Orientation	**.32**	.19	-.03	**.52**	**.31**	**.22**	**.34**	**.33**	-.04	**.40**	**.32**	**.26**	**.28**	**.38**	**.25**	**.29**	**.43**	**.24**	**.26**	**.62**	**.33**	**.33**	**.52**	**.24**	**.44**	**.33**	**.48**

Note. $n = 87$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Correlations between WVI Scores and Criteria

Table A3.8. Correlations between WVI Scores and Criteria for the Full CV Sample

	Criterion Type/Scale												
	Performance Criteria					Retention Criteria							
	Army-Wide			*MOS-Specific*		*Army-Wide*				*MOS-Specific*			
Score	Effort	Others	PFit	PerRat	JKT	ASat	AFit	Attrit	CarInt	MSat	MFit	PerCm	MExp
Social Status	.03	-.04	.01	.04	-.04	**.11**	**.12**	**-.15**	**.11**	**.17**	**.11**	.09	**.17**
Advancement	**.13**	.09	.03	.09	.00	**.14**	**.14**	**-.09**	**.16**	**.20**	.10	**.17**	**.19**
Autonomy	.05	-.01	-.02	.03	.06	-.05	-.04	.04	.00	.02	-.06	-.02	-.02
Supportive Supervision	.07	.07	.04	.02	-.02	**.18**	**.11**	**-.12**	**.18**	**.19**	**.11**	-.03	**.19**
Leisure Time	.00	-.02	-.06	-.02	.08	-.08	**-.09**	.07	**-.10**	.03	.02	-.03	.01
Comfort	-.10	-.07	-.07	**-.09**	-.04	-.08	**-.17**	**.10**	**-.09**	.02	**-.13**	**-.12**	-.02
Achievement	.06	.06	.03	.07	.04	**.16**	**.15**	**-.18**	**.12**	**.14**	**.11**	.06	**.16**
Societal Contribution	.01	-.03	-.04	-.02	.02	**.12**	**.14**	**-.13**	.07	.07	**.11**	**.13**	**.16**
Independence	.03	.00	-.08	-.04	-.01	**-.09**	**-.11**	**.10**	**-.09**	-.05	-.05	**-.13**	-.05
Social Service	.03	-.04	-.02	-.02	.02	**.14**	**.13**	**-.09**	**.11**	**.09**	**.16**	.09	**.23**
Fixed Role	**.20**	.09	.05	**.10**	.02	**.13**	**.16**	**-.15**	**.15**	**.14**	.06	.10	**.12**
Variety	-.03	-.07	-.03	-.01	.07	.07	.04	-.01	.06	**.10**	**.12**	.05	**.12**
Leadership Opportunities	.08	.04	.02	.09	.02	**.21**	**.24**	**-.17**	**.23**	**.25**	**.17**	**.23**	**.23**
Feedback	.02	.02	.01	.04	.03	**.17**	**.15**	**-.13**	**.12**	**.17**	**.12**	.08	**.17**
Travel	.00	-.04	-.03	-.01	-.01	**.15**	**.12**	**-.13**	**.20**	**.10**	.03	**.18**	.04
Physical Development	**.16**	.09	**.20**	**.16**	-.04	**.23**	**.18**	**-.18**	**.18**	**.21**	**.12**	**.18**	**.20**
Ability Utilization	.05	.04	.03	.04	**.14**	**.12**	**.10**	**-.10**	.08	.06	.02	.07	.05
Creativity	**-.13**	-.07	-.08	-.05	.06	-.07	-.06	.04	-.06	-.05	-.06	-.02	-.06
Recognition	-.02	-.04	-.06	-.03	-.02	.04	.04	-.08	.04	**.09**	.03	.06	.06
Co-workers	-.03	.00	.04	.00	.06	**.10**	.07	-.07	.08	**.14**	.06	.03	**.18**
Activity	.11	.06	.09	**.13**	**.09**	**.21**	**.18**	**-.14**	**.10**	**.11**	**.16**	.10	**.14**
Flexible Schedule	-.01	.03	-.01	.00	.03	-.06	**-.11**	.05	-.05	-.03	**-.14**	-.08	**-.12**
Personal Development	.01	.05	-.01	.01	.02	**.13**	**.08**	-.04	**.13**	.07	.10	.09	**.11**
Home	-.06	-.03	.00	-.02	.08	-.03	-.04	.00	-.02	.02	-.03	-.04	.00
Esteem	.01	-.01	-.07	-.06	.02	.07	.05	**-.10**	.05	.05	.00	-.01	.03
Emotional Development	.07	-.01	.04	.04	.00	**.23**	**.21**	**-.13**	**.16**	**.12**	**.11**	**.15**	**.14**
Influence	.04	.00	.04	.07	-.01	**.12**	**.12**	**-.09**	**.13**	**.11**	.09	**.13**	.10
Team Orientation	.00	-.07	-.02	.01	.06	**.10**	**.09**	-.07	**.12**	**.09**	.08	-.01	**.12**

Note. *n* = 281-542. Statistically significant correlations are bolded, p < .05 (two-tailed).
Army-Wide Performance Criteria: Effort = Exhibits Effort & Professionalism Performance Rating Scale (PRS); Others = Works Effectively with Others PRS; PFit = Demonstrates Physical Fitness PRS. MOS-Specific Performance Criteria: PerRat = MOS-Specific Performance Ratings Composite; JKT = MOS-Specific Job Knowledge Test. Army-Wide Retention Criteria: ASat = Satisfaction with Army Scale; AFit = Perceived Army Fit Scale; Attrit = Attrition Cognitions Scale; CarInt = Career Intentions Scale. MOS-Specific Retention Criteria: MSat = Satisfaction with MOS Scale; MFit = Perceived MOS Fit Scale; PerCm = Perceived Competence Scale; MExp = MOS Exceeds Pre-Enlistment Expectations Scale.

Work Suitability Inventory (WSI)

Basic Descriptive Statistics (Means, SDs) for WSI

Table A4.1. Descriptive Statistics for WSI Scores in the Full CV Sample and by MOS

Score		Full CV Sample		11B		19K		25U		63B		68W	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	Achievement/Effort	10.40	4.45	10.13	4.73	9.95	4.42	11.12	3.89	11.27	4.02	10.17	4.39
2	Adaptability/Flexibility	8.83	4.17	8.92	4.45	8.91	4.10	8.46	3.84	8.79	3.79	8.82	4.03
3	Attention to Detail	10.04	4.28	9.87	4.41	9.91	4.20	10.31	3.80	9.81	4.57	10.64	4.09
4	Concern for Others	6.83	4.89	6.14	4.83	7.46	5.27	8.04	4.40	6.29	4.28	7.78	5.28
5	Cooperation	7.37	4.43	7.01	4.29	8.26	4.28	7.68	4.58	7.64	4.40	7.17	4.83
6	Dependability	8.79	4.15	8.64	4.21	8.25	4.22	9.74	4.03	9.35	4.06	8.45	4.00
7	Energy	8.97	4.44	9.58	4.36	8.50	4.85	7.85	4.58	8.66	4.32	8.80	4.10
8	Independence	9.81	4.89	9.38	4.85	9.79	4.84	10.43	5.10	10.17	5.25	10.25	4.55
9	Initiative	7.25	3.91	7.80	3.74	7.13	4.15	6.85	4.18	7.10	3.90	6.26	3.83
10	Innovation	9.44	4.70	9.08	4.78	9.55	4.46	10.14	4.54	10.14	4.59	9.18	4.85
11	Leadership Orientation	10.69	4.18	10.77	4.20	11.20	4.13	10.57	4.16	10.92	4.21	9.91	4.15
12	Persistence	6.89	4.02	6.87	4.07	7.30	4.03	6.35	3.96	7.65	4.05	6.38	3.83
13	Self-Control	8.30	4.43	8.85	4.46	7.88	3.90	7.32	4.19	7.09	4.48	8.91	4.61
14	Social Orientation	8.04	4.41	8.07	4.29	8.39	4.54	7.36	4.63	8.22	4.39	8.02	4.52
15	Stress Tolerance	6.73	4.66	7.39	4.61	6.18	4.42	5.01	4.23	5.71	4.30	7.56	5.13
16	Cultural Tolerance	7.63	4.76	7.51	4.63	7.33	5.28	8.78	4.73	7.18	4.77	7.71	4.67

Note. . n = 563. n_{11B} = 250. n_{19K} = 80. n_{31U} = 69. n_{63B} = 82. n_{68W} = 87. Because of the ipsative nature of the WSI no internal consistency reliability estimates are provided for the WSI scales.

Intercorrelations among WSI Scores

Table A4.2. Intercorrelations among WSI Scores in the Full CV Sample

Score		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Achievement/Effort	-														
2	Adaptability/Flexibility	**.12**	-													
3	Attention to Detail	**.20**	.00	-												
4	Concern for Others	**-.19**	.05	**-.10**	-											
5	Cooperation	**-.13**	.06	**-.16**	**.43**	-										
6	Dependability	**.14**	**-.13**	**.17**	**-.14**	-.08	-									
7	Energy	.03	**-.13**	-.01	**-.22**	**-.18**	.06	-								
8	Independence	**-.11**	**-.11**	-.04	**-.15**	**-.16**	.00	.01	-							
9	Initiative	-.04	-.01	-.07	**-.18**	**-.16**	-.01	-.02	-.01	-						
10	Innovation	**-.12**	.00	**-.15**	.00	**-.11**	**-.23**	**-.23**	**.12**	.04	-					
11	Leadership Orientation	.00	**-.27**	-.06	**-.22**	**-.15**	.01	.03	-.04	.07	-.03	-				
12	Persistence	-.07	**-.15**	-.04	**-.21**	**-.22**	-.03	**-.14**	**.12**	-.05	.02	-.02	-			
13	Self-Control	**-.21**	**-.15**	**-.12**	**-.18**	**-.16**	**-.17**	-.05	**-.11**	-.06	**-.15**	-.04	.06	-		
14	Social Orientation	**-.20**	**-.11**	**-.23**	.04	.03	**-.17**	-.05	**-.32**	**-.17**	**-.09**	-.02	-.06	**.10**	-	
15	Stress Tolerance	**-.14**	**-.15**	**-.09**	**-.29**	**-.20**	-.06	**.11**	**-.13**	-.05	**-.16**	-.02	.01	**.26**	.02	-
16	Cultural Tolerance	**-.23**	-.01	**-.23**	**.20**	**.10**	**-.26**	**-.18**	**-.16**	**-.14**	.00	**-.15**	**-.11**	-.02	**.18**	**-.13**

Note. $n = 567$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WSI Scores (cont'd)

Table A4.3. Intercorrelations among WSI Scores for 11B in the Full CV Sample

Score		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Achievement/Effort	-														
2	Adaptability/Flexibility	**.15**	-													
3	Attention to Detail	**.22**	-.01	-												
4	Concern for Others	**-.24**	.08	**-.17**	-											
5	Cooperation	**-.16**	.12	**-.13**	**.51**	-										
6	Dependability	**.14**	-.10	**.17**	**-.17**	-.12	-									
7	Energy	.03	**-.16**	.00	**-.22**	**-.23**	.09	-								
8	Independence	**-.13**	-.07	-.09	**-.21**	**-.17**	.03	.06	-							
9	Initiative	-.01	-.06	.00	**-.15**	-.11	-.03	.02	.00	-						
10	Innovation	**-.18**	-.03	**-.17**	.02	**-.15**	**-.26**	**-.21**	**.15**	-.01	-					
11	Leadership Orientation	-.04	**-.29**	-.02	**-.22**	**-.20**	.06	.10	-.05	.05	-.01	-				
12	Persistence	**-.13**	**-.16**	-.10	-.12	**-.17**	**-.13**	**-.19**	.07	-.08	.12	-.03	-			
13	Self-Control	**-.20**	**-.19**	-.10	**-.21**	**-.17**	-.11	-.09	-.10	-.09	-.09	-.06	**.15**	-		
14	Social Orientation	**-.18**	-.10	**-.29**	.07	.00	**-.19**	-.07	**-.28**	**-.18**	-.05	-.02	-.03	**.14**	-	
15	Stress Tolerance	-.08	**-.20**	-.08	**-.30**	**-.19**	.02	**.13**	**-.13**	-.04	**-.20**	.02	-.03	**.15**	.06	-
16	Cultural Tolerance	**-.21**	-.02	**-.20**	**.24**	**.15**	**-.31**	**-.21**	**-.14**	**-.14**	-.01	**-.18**	-.10	-.01	**.15**	-.09

Note. $n = 253$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WSI Scores (cont'd)

Table A4.4. Intercorrelations among WSI Scores for 19K in the Full CV Sample

Score		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Achievement/Effort	-														
2	Adaptability/Flexibility	.16	-													
3	Attention to Detail	**.29**	.08	-												
4	Concern for Others	-.18	.03	-.10	-											
5	Cooperation	-.10	.09	-.22	**.38**	-										
6	Dependability	**.32**	-.17	**.30**	-.16	-.12	-									
7	Energy	.00	-.12	.00	-.22	**-.26**	-.12	-								
8	Independence	**-.23**	**-.24**	-.08	-.15	-.16	-.13	-.10	-							
9	Initiative	-.01	-.15	-.02	-.12	**-.27**	-.02	-.11	.02	-						
10	Innovation	**-.23**	-.14	-.08	**.27**	.01	**-.37**	**-.32**	.16	.07	-					
11	Leadership Orientation	.07	**-.33**	.08	**-.44**	-.16	.04	.11	.04	.21	-.12	-				
12	Persistence	-.16	-.06	**-.25**	-.19	**-.23**	.09	.04	**.32**	-.08	-.08	-.15	-			
13	Self-Control	-.18	-.07	**-.25**	**-.23**	-.03	**-.27**	-.18	-.04	.03	-.03	.13	-.06	-		
14	Social Orientation	-.19	-.12	**-.26**	.02	.05	-.09	.22	**-.26**	-.22	-.11	.04	-.08	.01	-	
15	Stress Tolerance	-.16	-.07	-.16	**-.25**	-.01	.09	.13	-.03	.00	-.18	-.06	-.06	**.25**	-.22	-
16	Cultural Tolerance	**-.27**	.14	**-.24**	.09	-.02	**-.25**	-.13	-.15	-.20	.05	**-.28**	-.01	.06	.13	-.16

Note. $n = 76$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WSI Scores (cont'd)

Table A4.5. Intercorrelations among WSI Scores for 25U in the Full CV Sample

Score		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Achievement/Effort	-														
2	Adaptability/Flexibility	.16	-	-.09												
3	Attention to Detail	.05	-.09	-												
4	Concern for Others	-.16	.11	.02	-											
5	Cooperation	-.22	.08	-.08	**.28**	-										
6	Dependability	-.16	**-.25**	.08	-.12	.04	-									
7	Energy	-.01	.00	.06	**-.36**	-.09	.12	-								
8	Independence	-.05	-.18	.01	.02	-.09	.00	.04	-							
9	Initiative	-.01	.11	-.05	-.17	**-.24**	-.05	-.07	-.01	-						
10	Innovation	.06	.22	-.05	.07	-.14	**-.44**	-.14	.08	.03	-					
11	Leadership Orientation	-.12	**-.39**	-.18	-.21	-.14	.02	.02	.09	.08	.08	-				
12	Persistence	-.04	-.23	-.11	-.11	**-.25**	.23	**-.30**	.04	-.03	**-.32**	.00	-			
13	Self-Control	-.03	-.22	-.20	-.19	-.15	-.09	.05	-.14	-.16	**-.29**	-.04	.10	-		
14	Social Orientation	-.09	-.08	-.12	-.03	.10	-.03	-.02	**-.38**	**-.29**	-.12	-.20	-.06	.08	-	
15	Stress Tolerance	-.09	-.15	-.02	**-.34**	-.23	-.17	.09	**-.29**	.05	-.20	.03	.06	**.39**	.09	-
16	Cultural Tolerance	-.12	.00	-.20	.11	.03	-.11	**-.40**	**-.29**	-.11	.07	-.07	.11	-.07	.11	-.14

Note. $n = 72$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WSI Scores (cont'd)

Table A4.6. Intercorrelations among WSI Scores for 63B in the Full CV Sample

Score		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Achievement/Effort	-														
2	Adaptability/Flexibility	.18	-													
3	Attention to Detail	**.28**	.11	-												
4	Concern for Others	-.12	-.18	.06	-											
5	Cooperation	.05	-.10	-.19	**.38**	-										
6	Dependability	**.26**	-.09	.07	-.01	-.12	-									
7	Energy	.14	-.12	.01	-.21	-.12	.19	-								
8	Independence	.00	-.01	-.06	**-.26**	-.19	-.16	.05	-							
9	Initiative	-.06	-.02	-.22	-.22	-.15	.09	-.11	-.13	-						
10	Innovation	-.19	.03	**-.27**	.01	-.02	-.11	**-.31**	-.06	.16	-					
11	Leadership Orientation	-.01	-.06	-.13	-.01	-.01	-.05	-.18	-.17	.06	-.07	-				
12	Persistence	.03	-.13	.19	**-.32**	**-.39**	-.12	.00	.16	.08	-.12	-.02	-			
13	Self-Control	**-.43**	.01	-.22	-.16	**-.29**	**-.26**	.05	.06	-.01	-.07	-.16	.08	-		
14	Social Orientation	**-.37**	**-.23**	-.16	.15	.11	-.16	**-.28**	**-.29**	.03	.02	.10	**-.29**	.02	-	
15	Stress Tolerance	**-.34**	-.01	-.18	**-.23**	-.12	-.16	-.02	-.04	-.17	.10	-.19	.19	**.23**	-.10	-
16	Cultural Tolerance	**-.30**	**-.24**	**-.26**	.08	.14	**-.24**	-.08	-.11	-.18	-.14	-.04	**-.28**	.08	**.40**	.00

Note. $n = 77$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among WSI Scores (cont'd)

Table A4.8. Intercorrelations among WSI Scores for 68W in the Full CV Sample

Score		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Achievement/Effort	-														
2	Adaptability/Flexibility	-.04	-													
3	Attention to Detail	.13	-.06	-												
4	Concern for Others	-.16	.15	-.20	-											
5	Cooperation	-.15	.02	**-.23**	**.42**	-										
6	Dependability	.05	-.07	**.26**	-.16	-.03	-									
7	Energy	.11	-.21	-.09	-.05	-.05	.06	-								
8	Independence	-.12	-.15	.12	-.15	-.17	.14	-.06	-							
9	Initiative	-.12	.13	-.11	-.17	-.13	-.01	-.03	.16	-						
10	Innovation	.00	.06	-.13	**-.36**	-.15	-.04	-.15	.17	.06	-					
11	Leadership Orientation	.12	**-.25**	-.11	-.17	-.13	-.13	-.07	-.02	-.05	-.07	-				
12	Persistence	.06	-.18	**.21**	**-.43**	**-.24**	.01	**-.22**	.13	-.10	.19	.06	-			
13	Self-Control	-.14	-.20	.02	-.05	-.08	-.18	-.10	**-.26**	-.08	**-.31**	.01	-.11	-		
14	Social Orientation	-.19	-.05	-.16	.02	-.04	**-.30**	-.07	**-.44**	-.18	**-.23**	-.03	.03	.16	-	
15	Stress Tolerance	-.09	**-.22**	-.07	**-.28**	**-.32**	-.12	.01	-.09	-.14	-.08	.02	.01	**.37**	.11	-
16	Cultural Tolerance	**-.34**	.11	**-.36**	**.32**	.08	**-.29**	-.03	-.18	-.04	.06	-.10	**-.22**	-.18	**.26**	**-.26**

Note. $n = 89$. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Correlations between WSI Scores and Criteria

Table A4.9. Correlations between WSI Scores and Criteria for the Full CV Sample

	Criterion Type/Scale												
	Performance Criteria					Retention Criteria							
	Army-Wide			*MOS-Specific*		*Army-Wide*				*MOS-Specific*			
Score	Effort	Others	PFit	PerRat	JKT	ASat	AFit	Attrit	CarInt	MSat	MFit	PerCm	MExp
Achievement/Effort	**.12**	.04	**.10**	**.10**	-.02	**.13**	**.10**	**-.14**	.05	**.12**	.09	**.15**	.09
Adaptability/Flexibility	.01	.03	-.02	-.07	-.05	-.02	-.04	.02	-.05	-.05	-.05	-.03	-.02
Attention to Detail	.12	.10	.04	**.10**	.02	**.14**	**.12**	**-.13**	.04	.06	.01	.07	.05
Concern for Others	-.01	.02	**-.11**	**-.16**	**-.14**	**-.16**	**-.20**	**.19**	**-.12**	**-.18**	-.10	**-.20**	-.06
Cooperation	-.10	-.06	**-.09**	**-.18**	**-.16**	-.02	-.09	**.10**	-.05	-.08	**-.15**	**-.17**	-.04
Dependability	**.13**	**.12**	.06	**.11**	-.04	**.10**	**.11**	**-.15**	**.11**	.05	.06	.04	.01
Energy	.07	.02	**.19**	.07	-.01	**.11**	**.11**	**-.13**	**.13**	**.11**	**.13**	.10	**.12**
Independence	.06	.05	-.02	.04	.08	**-.17**	**-.16**	**.13**	-.08	**-.18**	**-.13**	**-.16**	**-.17**
Initiative	.05	-.03	.00	.02	.02	.02	.06	.02	.03	.06	-.03	.06	-.03
Innovation	-.11	-.01	-.06	-.04	.08	**-.15**	**-.15**	**.13**	**-.12**	**-.10**	-.09	-.09	-.10
Leadership Orientation	.02	.01	.05	**.11**	.04	.01	**.15**	-.08	**.13**	**.13**	.09	**.20**	.07
Persistence	-.09	-.05	.00	.02	.01	-.05	-.03	.05	**-.09**	-.03	-.03	-.05	-.08
Self-Control	-.01	-.06	-.01	.03	**.10**	.04	**.11**	-.05	.02	.02	**.13**	**.11**	.10
Social Orientation	**-.16**	-.10	-.02	-.04	.01	.05	-.01	-.03	.06	**.12**	.06	-.02	.08
Stress Tolerance	-.01	-.06	.02	.04	**.12**	**.14**	**.14**	**-.12**	**.10**	**.13**	**.17**	**.16**	**.14**
Cultural Tolerance	-.06	-.02	-.09	**-.13**	-.06	**-.09**	**-.15**	**.13**	**-.12**	**-.11**	**-.13**	**-.11**	**-.14**

Note. n = 273-516. Statistically significant correlations are bolded, $p < .05$ (two-tailed).
Army-Wide Performance Criteria: Effort = Exhibits Effort & Professionalism Performance Rating Scale (PRS); Others = Works Effectively with Others PRS; PFit = Demonstrates Physical Fitness PRS. MOS-Specific Performance Criteria: PerRat = MOS-Specific Performance Ratings Composite; JKT = MOS-Specific Job Knowledge Test. Army-Wide Retention Criteria: ASat = Satisfaction with Army Scale; AFit = Perceived Army Fit Scale; Attrit = Attrition Cognitions Scale; CarInt = Career Intentions Scale. MOS-Specific Retention Criteria: MSat = Satisfaction with MOS Scale; MFit = Perceived MOS Fit Scale; PerCm = Perceived Competence Scale; MExp = MOS Exceeds Pre-Enlistment Expectations Scale.

Rational Biodata Inventory (RBI)

Basic Descriptive Statistics (Means, SDs) and Reliability Estimates for RBI

Table A5.1. Descriptive Statistics and Reliability Estimates for RBI Scales for the Full CV Sample

Scale	Items	*M*	*SD*	α
Army Affective Commitment	7	3.06	.82	.77
Cognitive Flexibility	8	3.37	.72	.82
Cultural Tolerance	5	3.67	.78	.76
Fitness Motivation	7	3.51	.65	.74
Gratitude	3	3.83	.70	.54
Interpersonal Skills - Diplomacy	5	3.38	.80	.77
Respect for Authority	4	3.26	.69	.71
Stress Tolerance	11	2.97	.51	.69
Team Orientation	7	3.06	.51	.65
Lie	7	.06	.11	.42

Note. n = 375-564. Items = number of items comprising each final scale. α = internal consistency reliability estimates.

Table A5.2. Descriptive Statistics and Reliability Estimates for RBI Scales by MOS

	11B			19K			25U			63B			68W		
Scale	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α
Army Affective Commitment	3.14	.86	.79	3.02	.72	.71	2.87	.82	.77	3.09	.80	.77	2.98	.78	.73
Cognitive Flexibility	3.40	.75	.83	3.18	.64	.77	3.47	.65	.73	3.25	.74	.82	3.53	.69	.83
Cultural Tolerance	3.66	.86	.81	3.44	.75	.72	3.89	.61	.65	3.66	.71	.71	3.82	.65	.68
Fitness Motivation	3.56	.63	.72	3.43	.65	.75	3.43	.74	.79	3.55	.59	.70	3.45	.68	.78
Gratitude	3.83	.73	.54	3.82	.66	.55	3.85	.62	.33	3.74	.77	.66	3.93	.63	.50
Interpersonal Skills - Diplomacy	3.42	.80	.77	3.36	.83	.83	3.38	.84	.77	3.35	.79	.76	3.34	.80	.77
Respect for Authority	3.26	.70	.70	3.22	.64	.64	3.27	.70	.74	3.24	.75	.80	3.31	.63	.72
Stress Tolerance	2.96	.52	.69	2.96	.48	.67	2.92	.48	.60	2.92	.58	.75	3.08	.46	.64
Team Orientation	3.08	.47	.63	3.08	.55	.71	3.11	.64	.76	3.05	.47	.52	3.04	.51	.68
Lie	.05	.09	.28	.03	.10	*	.06	.11	.39	.08	.12	*	.05	.12	.58

Note. n_{11B} = 92-251. n_{19K} = 86-87. n_{25U} = 19-49. n_{63B} = 86-88. n_{68W} = 88-89. α = internal consistency reliability estimates (coefficient alpha). * = Reliability estimates could not be computed, as there were less than two items with non-zero variance.

Intercorrelations among RBI Scale Scores

Table A5.3. Intercorrelations among RBI Scale Scores in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10
1	Army Affective Commitment	-									
2	Cognitive Flexibility	**.11**	-								
3	Cultural Tolerance	**.08**	**.38**	-							
4	Fitness Motivation	**.24**	**.13**	**.13**	-						
5	Gratitude	**.33**	**.30**	**.27**	**.12**	-					
6	Interpersonal Skills - Diplomacy	**.10**	**.23**	**.35**	**.23**	**.34**	-				
7	Respect for Authority	**.34**	**.32**	**.16**	**.12**	**.46**	**.15**	-			
8	Stress Tolerance	**.13**	-.04	**.20**	**.18**	**.13**	**.24**	**-.10**	-		
9	Team Orientation	**.29**	**.18**	**.24**	**.15**	**.38**	**.53**	**.29**	**.27**	-	
10	Lie	.04	**.11**	**.16**	**.10**	.02	.03	-.02	**.19**	.03	-

Note. n = 372-564. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Table A5.4. Intercorrelations among RBI Scale Scores for 11B in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10
1	Army Affective Commitment	-									
2	Cognitive Flexibility	**.16**	-								
3	Cultural Tolerance	.08	**.41**	-							
4	Fitness Motivation	**.22**	**.20**	**.20**	-						
5	Gratitude	**.33**	**.27**	**.32**	**.15**	-					
6	Interpersonal Skills - Diplomacy	.10	**.27**	**.44**	**.22**	**.29**	-				
7	Respect for Authority	**.41**	**.30**	**.20**	.06	**.37**	**.19**	-			
8	Stress Tolerance	**.18**	.01	**.23**	**.26**	**.16**	**.26**	-.10	-		
9	Team Orientation	**.25**	.05	**.26**	.10	**.25**	**.37**	**.32**	**.27**	-	
10	Lie	.07	**.17**	**.14**	**.15**	.03	.04	-.02	**.16**	-.01	-

Note. n = 91-251. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among RBI Scale Scores (cont'd)

Table A5.5. Intercorrelations among RBI Scale Scores for 19K in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10
1	Army Affective Commitment	-									
2	Cognitive Flexibility	.03	-								
3	Cultural Tolerance	-.03	**.26**	-							
4	Fitness Motivation	**.41**	.05	.07	-						
5	Gratitude	.11	**.36**	.19	-.03	-					
6	Interpersonal Skills - Diplomacy	.13	**.33**	**.34**	.19	**.49**	-				
7	Respect for Authority	**.23**	**.39**	.10	**.21**	**.42**	**.30**	-			
8	Stress Tolerance	**.23**	-.06	.19	.06	.18	**.30**	.06	-		
9	Team Orientation	**.31**	**.34**	**.30**	**.25**	**.48**	**.59**	**.41**	**.35**	-	
10	Lie	.10	-.07	.10	.18	-.04	.08	**.23**	.13	.11	-

Note. n = 86-87. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Table A5.6. Intercorrelations among RBI Scale Scores for 25U in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10
1	Army Affective Commitment	-									
2	Cognitive Flexibility	.11	-								
3	Cultural Tolerance	-.10	.27	-							
4	Fitness Motivation	.13	-.01	-.01	-						
5	Gratitude	.25	**.36**	.19	.05	-					
6	Interpersonal Skills - Diplomacy	-.06	.05	.13	**.37**	.20	-				
7	Respect for Authority	**.43**	**.36**	.16	.12	**.54**	-.07	-			
8	Stress Tolerance	.07	-.14	.02	**.29**	.09	**.43**	.09	-		
9	Team Orientation	.19	.08	-.19	.25	**.49**	**.60**	.35	**.56**	-	
10	Lie	-.27	.02	-.01	.01	-.17	.08	**-.29**	.04	-.02	-

Note. n = 19-49. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among RBI Scale Scores (cont'd)

Table A5.7. Intercorrelations among RBI Scale Scores for 63B in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10
1	Army Affective Commitment	-									
2	Cognitive Flexibility	.12	-								
3	Cultural Tolerance	**.25**	**.22**	-							
4	Fitness Motivation	.07	**.27**	.10	-						
5	Gratitude	**.49**	**.21**	.19	.21	-					
6	Interpersonal Skills - Diplomacy	.09	**.23**	**.33**	**.30**	**.38**	-				
7	Respect for Authority	**.50**	**.30**	-.05	**.23**	**.64**	.13	-			
8	Stress Tolerance	**-.23**	-.19	.17	-.05	-.12	.09	**-.40**	-		
9	Team Orientation	**.26**	**.24**	**.26**	.16	**.42**	**.56**	**.29**	.12	-	
10	Lie	-.04	.17	.14	-.02	.03	.06	-.13	.15	.01	-

Note. n = 85-88. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Table A5.8. Intercorrelations among RBI Scale Scores for 68W in the Full CV Sample

Scale		1	2	3	4	5	6	7	8	9	10
1	Army Affective Commitment	-									
2	Cognitive Flexibility	.04	-								
3	Cultural Tolerance	**.23**	**.55**	-							
4	Fitness Motivation	**.31**	-.03	.07	-						
5	Gratitude	**.40**	**.38**	**.33**	.17	-					
6	Interpersonal Skills - Diplomacy	.20	.10	**.25**	.12	**.40**	-				
7	Respect for Authority	-.03	**.31**	**.27**	.09	**.48**	.04	-			
8	Stress Tolerance	**.41**	-.03	**.24**	**.29**	**.29**	**.23**	.04	-		
9	Team Orientation	**.37**	.18	**.27**	.06	**.34**	**.54**	.16	**.31**	-	
10	Lie	.18	.09	**.33**	.08	.14	-.09	.04	**.45**	.03	-

Note. n = 88-89. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Correlations between RBI Scale Scores and Criteria

Table A5.9. Correlations between RBI Scale Scores and Criteria for the Full CV Sample

	Criterion Type/Scale											
	Performance Criteria					Retention Criteria						
	Army-Wide			*MOS-Specific*		*Army-Wide*				*MOS-Specific*			
Scale	Effort	Others	PFit	PerRat	JKT	ASat	AFit	Attrit	CarInt	MSat	MFit	PerCm	MExp
Army Affective Commitment	**.18**	.08	**.19**	**.17**	.04	**.50**	**.65**	**-.46**	**.53**	**.32**	**.40**	**.36**	**.44**
Cognitive Flexibility	.02	.09	.02	.07	**.12**	.08	**.11**	**-.10**	.05	-.06	.01	**.14**	-.02
Cultural Tolerance	.02	.06	.00	-.02	-.02	**.15**	**.12**	-.08	.06	.00	.02	**.17**	.02
Fitness Motivation	**.13**	.09	**.40**	**.27**	-.01	**.19**	**.22**	**-.23**	**.13**	**.15**	**.13**	**.36**	**.11**
Gratitude	.11	.06	.08	**.10**	**.09**	**.27**	**.31**	**-.32**	**.17**	**.21**	**.14**	**.25**	**.19**
Interpersonal Skills-Diplomacy	.04	.01	.09	.08	.02	**.20**	**.14**	**-.18**	.08	**.13**	.03	**.25**	.07
Respect for Authority	**.13**	**.12**	**.13**	.07	-.02	**.34**	**.33**	**-.25**	**.22**	**.27**	**.21**	**.12**	**.27**
Stress Tolerance	.11	-.01	**.11**	**.09**	**.12**	**.23**	**.19**	**-.24**	**.16**	**.11**	**.13**	**.29**	.06
Team Orientation	**.15**	**.13**	**.15**	**.15**	.03	**.33**	**.35**	**-.32**	**.28**	**.27**	**.21**	**.29**	**.30**
Lie	-.05	.01	.01	-.01	**-.14**	**.14**	**.16**	-.04	**.18**	**.09**	.03	**.18**	.01

Note. n = 305-547. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Army-Wide Performance Criteria: Effort = Exhibits Effort & Professionalism Performance Rating Scale (PRS); Others = Works Effectively with Others PRS; PFit = Demonstrates Physical Fitness PRS. MOS-Specific Performance Criteria: PerRat = MOS-Specific Performance Ratings Composite; JKT = MOS-Specific Job Knowledge Test. Army-Wide Retention Criteria: ASat = Satisfaction with Army Scale; AFit = Perceived Army Fit Scale; Attrit = Attrition Cognitions Scale; CarInt = Career Intentions Scale. MOS-Specific Retention Criteria: MSat = Satisfaction with MOS Scale; MFit = Perceived MOS Fit Scale; PerCm = Perceived Competence Scale; MExp = MOS Exceeds Pre-Enlistment Expectations Scale.

Predictor Situational Judgment Test (PSJT)

Basic Descriptive Statistics (Means, SDs) and Reliability Estimates for the PSJT

Table A6.1. Descriptive Statistics and Reliability Estimates for the PSJT for the Full CV Sample and by MOS

Sample	*n*	*M*	*SD*	α
Full CV Sample	479	4.60	0.39	.85
MOS				
11B	224	4.55	0.40	.85
19K	57	4.57	0.37	.84
25U	59	4.71	0.38	.86
63B	60	4.61	0.38	.85
68W	79	4.72	0.32	.82

Note. α = internal consistency reliability estimates (coefficient alpha).

Correlations between PSJT Scores and Criteria

Table A6.2. Correlations between PSJT Scores and Criteria for the Full CV Sample

	Criterion Type/Scale												
	Performance Criteria					Retention Criteria							
	Army-Wide			*MOS-Specific*		*Army-Wide*				*MOS-Specific*			
Measure	Effort	Others	PFit	PerRat	JKT	ASat	AFit	Attrit	CarInt	MSat	MFit	PerCm	MExp
PSJT	-.03	-.04	-.02	.06	**.16**	**.17**	**.17**	**-.16**	**-.13**	.04	.05	.08	**.14**

Note. *n* = 235-466. Statistically significant correlations are bolded, p < .05 (two-tailed).
Army-Wide Performance Criteria: Effort = Exhibits Effort & Professionalism Performance Rating Scale (PRS); Others = Works Effectively with Others PRS; PFit = Demonstrates Physical Fitness PRS. MOS-Specific Performance Criteria: PerRat = MOS-Specific Performance Ratings Composite; JKT = MOS-Specific Job Knowledge Test. Army-Wide Retention Criteria: ASat = Satisfaction with Army Scale; AFit = Perceived Army Fit Scale; Attrit = Attrition Cognitions Scale; CarInt = Career Intentions Scale. MOS-Specific Retention Criteria: MSat = Satisfaction with MOS Scale; MFit = Perceived MOS Fit Scale; PerCm = Perceived Competence Scale; MExp = MOS Exceeds Pre-Enlistment Expectations Scale.

APPENDIX B
PSYCHOMETRIC PROPERTIES OF THE CV CRITERION MEASURES

Army Life Questionnaire (ALQ)

Basic Descriptive Statistics (Means, SDs) and Reliability Estimates for ALQ

Table B1.1. Descriptive Statistics and Reliability Estimates for ALQ Scale Scores for the Full CV Sample

Scale	Items	*M*	*SD*	α
Satisfaction with Army	10	2.86	.81	.85
Satisfaction with MOS	9	3.06	.94	.90
Perceived MOS Fit	10	3.14	.96	.93
Perceived Army Fit	10	3.15	.84	.80
Perceived Competence	7	3.89	.70	.74
MOS Exceeds Expectations	7	2.92	.91	.84
Attrition Cognitions	3	2.15	.96	.69
Career Intentions	5	2.13	1.16	.95

Note. n = 381-592. Items = number of items comprising each final scale. α = internal consistency reliability estimates.

Table B1.2. Descriptive Statistics and Reliability Estimates for ALQ Scale Scores by MOS

	11B			19K			25U			63B			68W		
Scale	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α
Satisfaction with Army	2.78	.78	.79	2.88	.86	.87	2.99	.87	.90	3.08	.78	.83	2.75	.79	.83
Satisfaction with MOS	2.99	.93	.91	3.13	.85	.87	3.17	.83	.93	3.37	.92	.88	2.80	1.04	.92
Perceived MOS Fit	3.01	1.04	.94	2.86	.90	.92	3.20	.75	.91	3.37	.86	.92	3.35	.99	.93
Perceived Army Fit	3.07	.84	.80	3.12	.77	.79	3.10	.83	.78	3.37	.84	.87	3.19	.91	.85
Perceived Competence	4.06	.67	.77	3.77	.69	.68	3.85	.83	.73	3.87	.61	.72	3.82	.77	.75
MOS Exceeds Expectations	2.78	.83	.80	2.85	.95	.86	2.83	1.00	.91	3.08	.84	.79	3.00	1.00	.87
Attrition Cognitions	2.16	.98	.72	2.32	.95	.75	1.90	.86	.75	2.01	.91	.67	2.26	1.01	.71
Career Intentions	2.01	1.05	.95	2.21	1.27	.96	2.17	1.31	.96	2.31	1.24	.96	2.11	1.10	.96

Note. n_{11B} = 98-124. n_{19K} = 92. n_{25U} = 22-72. n_{63B} = 95. n_{68W} = 74-93. α = internal consistency reliability estimates.

Intercorrelations among ALQ Scale Scores

Table B1.3. Intercorrelations among ALQ Scale Scores in the Full CV Sample

Scale		1	2	3	4	5	6	7
1	Satisfaction with Army	-						
2	Satisfaction with MOS	**.57**	-					
3	Perceived MOS Fit	**.44**	**.41**	-				
4	Perceived Army Fit	**.68**	**.47**	**.50**	-			
5	Perceived Competence	**.44**	**.36**	**.42**	**.52**	-		
6	MOS Exceeds Expectations	**.53**	**.57**	**.73**	**.57**	**.38**	-	
7	Attrition Cognitions	**.51**	**.36**	**.36**	**.54**	**.48**	**.39**	-
8	Career Intentions	**.53**	**.36**	**.35**	**.60**	**.30**	**.44**	**.40**

Note. n = 381-592. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Table B1.4. Intercorrelations among ALQ Scale Scores for11B in the Full CV Sample

Scale		1	2	3	4	5	6	7
1	Satisfaction with Army	-						
2	Satisfaction with MOS	**.62**	-					
3	Perceived MOS Fit	**.55**	**.49**	-				
4	Perceived Army Fit	**.66**	**.51**	**.66**	-			
5	Perceived Competence	**.37**	**.35**	**.55**	**.61**	-		
6	MOS Exceeds Expectations	**.49**	**.60**	**.73**	**.64**	**.46**	-	
7	Attrition Cognitions	**.51**	**.36**	**.50**	**.50**	**.54**	**.38**	-
8	Career Intentions	**.45**	**.39**	**.54**	**.51**	**.30**	**.49**	**.32**

Note. n = 98-24. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among ALQ Scale Scores (cont'd)

Table B1.5. Intercorrelations among ALQ Scale Scores for 19K in the Full CV Sample

Scale		1	2	3	4	5	6	7
1	Satisfaction with Army	-						
2	Satisfaction with MOS	**.66**	-					
3	Perceived MOS Fit	**.32**	**.47**	-				
4	Perceived Army Fit	**.61**	**.54**	**.44**	-			
5	Perceived Competence	**.62**	**.65**	**.46**	**.51**	-		
6	MOS Exceeds Expectations	**.48**	**.52**	**.82**	**.50**	**.44**	-	
7	Attrition Cognitions	**.53**	**.52**	**.32**	**.59**	**.45**	**.43**	-
8	Career Intentions	**.48**	**.43**	**.33**	**.69**	**.34**	**.40**	**.54**

Note. n = 92. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Table B1.6. Intercorrelations among ALQ Scale Scores for 25U in the Full CV Sample

Scale		1	2	3	4	5	6	7
1	Satisfaction with Army	-						
2	Satisfaction with MOS	**.51**	-					
3	Perceived MOS Fit	.27	**.68**	-				
4	Perceived Army Fit	**.76**	**.45**	.38	-			
5	Perceived Competence	**.47**	**.50**	**.52**	**.47**	-		
6	MOS Exceeds Expectations	**.71**	**.90**	**.69**	**.56**	**.55**	-	
7	Attrition Cognitions	**.45**	**.25**	.26	**.54**	**.48**	.40	-
8	Career Intentions	**.65**	**.34**	.05	**.64**	.29	**.54**	**.41**

Note. n = 22-72. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Intercorrelations among ALQ Scale Scores (cont'd)

Table B1.7. Intercorrelations among ALQ Scale Scores for 63B in the Full CV Sample

Scale		1	2	3	4	5	6	7
1	Satisfaction with Army	-						
2	Satisfaction with MOS	**.51**	-					
3	Perceived MOS Fit	**.50**	**.48**	-				
4	Perceived Army Fit	**.73**	**.42**	**.40**	-			
5	Perceived Competence	**.25**	.19	**.25**	**.36**	-		
6	MOS Exceeds Expectations	**.57**	**.64**	**.72**	**.51**	.18	-	
7	Attrition Cognitions	**.50**	**.32**	**.30**	**.60**	**.30**	**.38**	-
8	Career Intentions	**.55**	**.29**	**.24**	**.70**	**.29**	**.36**	**.45**

Note. n = 95. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

Table B1.8. Intercorrelations among ALQ Scale Scores for 68W in the Full CV Sample

Scale		1	2	3	4	5	6	7
1	Satisfaction with Army	-						
2	Satisfaction with MOS	**.41**	-					
3	Perceived MOS Fit	**.44**	**.24**	-				
4	Perceived Army Fit	**.71**	**.36**	**.48**	-			
5	Perceived Competence	**.55**	**.30**	**.44**	**.62**	-		
6	MOS Exceeds Expectations	**.57**	**.53**	**.68**	**.64**	**.45**	-	
7	Attrition Cognitions	**.50**	**.27**	**.31**	**.57**	**.58**	**.38**	-
8	Career Intentions	**.62**	**.34**	**.39**	**.57**	**.32**	**.52**	**.38**

Note. n = 74-93. Statistically significant correlations are bolded, $p < .05$ (two-tailed).

MOS-Specific Job Knowledge Tests (JKTs)

Basic Descriptive Statistics (Means, SDs) and Reliability Estimates for MOS-Specific JKTs

Table B2.1. Descriptive Statistics and Reliability Estimates for MOS-Specific JKT Scores

MOS	*n*	*M*	*SD*	α
11B	248	38.35	5.29	.64
19K	84	39.31	5.78	.65
25U	60	24.78	5.02	.64
63B	80	55.99	10.57	.86
68W	84	44.37	6.88	.65

Note. α = internal consistency reliability estimates (coefficient alpha).

Performance Rating Scales (PRS)

Basic Descriptive Statistics (Means, SDs) and Interrater Reliability Estimates for PRS

Table B1.1. Descriptive Statistics on PRS by MOS

	11B		19K		25U		63B		68W	
Composite/Scale	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
MOS-Specific Technical Performance (Composite)	5.07	.86	5.04	.82	5.06	.67	5.06	.93	5.10	.70
Exhibits Effort and Professionalism (Scale)	4.97	1.27	4.94	1.08	5.09	1.53	4.96	1.07	5.36	1.04
Works Effectively with Others (Scale)	5.29	1.09	5.18	1.01	5.41	1.26	5.45	1.16	5.51	.92
Demonstrates Physical Fitness (Scale)	5.00	1.29	4.99	1.21	4.79	1.46	5.49	1.15	4.70	1.09

Note. n_{11B} = 98-273. n_{19K} = 88. n_{25U} = 19-67. n_{63B} = 54. n_{68W} = 67.

Table B1.2. Interrater Reliability Estimates for PRS by MOS

	Single-Rater					*k*-Rater				
Composite/Scale	11B	19K	25U	63B	68W	11B	19K	25U	63B	68W
MOS-Specific Technical Performance (Composite)	.20	.14	.18	.40	.15	.41	.28	.29	.61	.32
Exhibits Effort and Professionalism (Scale)	.23	.14	.43	.21	.17	.50	.27	.52	.37	.34
Works Effectively with Others (Scale)	.11	.03	.71	.31	.02	.30	.07	.78	.51	.06
Demonstrates Physical Fitness (Scale)	.33	.26	.48	.11	.27	.58	.44	.64	.22	.47

The "*k*" for each of the estimates above are as follows:

Composite/Scale	11B	19K	25U	63B	68W
MOS-Specific Technical Performance (Composite)	2.80	2.34	1.93	2.30	2.54
Exhibits Effort and Professionalism (Scale)	3.44	2.25	1.42	2.23	2.53
Works Effectively with Others (Scale)	3.49	2.26	1.50	2.29	2.45
Demonstrates Physical Fitness (Scale)	2.75	2.30	1.89	2.24	2.48

Note. *k* represents the harmonic mean of the number of raters per Soldier.

APPENDIX C
TECHNICAL NOTES ON THE SIMULATION

Overview

As part of the current research effort, we evaluated the incremental validity and classification potential (as reflected in Horst's *d* and mean predicted criterion score, MPCS) of the experimental predictor measures over the existing ASVAB. The primary goal in this analysis was to estimate the increment in predictive validity and classification potential from adding each experimental predictor to a composite comprised of the existing ASVAB subtests, separately by criterion measure. This analysis was carried out using a Monte Carlo simulation to account for sampling variance in the construction of these composites.

The nature of the analysis and the dimensions of the predictor and criterion measures required a carefully designed simulation. The most important feature in the simulation design was that the expanded composites (i.e., composites consisting of one of the experimental predictor measures plus the eight operational ASVAB subtests) were based on the same simulated ASVAB subtest and criterion scores, across all experimental predictors, for each replication in the simulation. Otherwise, the simulation would be introducing extraneous variance that would confound one's ability to make meaningful comparisons across the experimental predictor measures. Other features of the simulation design were introduced to manage the computational burden and statistical feasibility of simulating scores, given the number of criterion measures and the dimensions of the experimental predictor measures.

The following steps were followed when simulating the ASVAB subtest, experimental predictor, and criterion scores for each replication in the simulation. These steps were applied separately by MOS for each criterion measure (the Army Life Questionnaire, ALQ; Performance Rating Scales, PRS; and MOS-specific Job Knowledge Test, JKT).

Step 1: Simulate ASVAB subtest scores XA=(XA1,…,XA7) from the multivariate normal distribution, $MVN\left(\mu_{XA}, \Sigma_{XA,XA}\right)$, where μ_{XA} and $\Sigma_{XA,XA}$ are the mean and covariance matrix of the ASVAB, using a reference population based on data for FY 2004 Army accessions.

Step 2: Given the ASVAB subtest scores simulated in Step 1, conditionally generate criterion scores Y=(Y1,…,Ym) for a given set of dimensions *m* (*m* = 8 for ALQ, *m* = 4 for PRS, and *m* = 1 for JKT). This step involves generating from $MVN\left(\mu_{Y|XA}, \Sigma_{Y,Y|XA}\right)$, the conditional distribution of Y given XA for the *j*th MOS, where $\mu_{Y|XA}$ and $\Sigma_{Y,Y|XA}$ are the mean vector and covariance matrix obtained from the regression of Y on XA.

Step 3: Given the ASVAB scores XA and criterion scores Y obtained in Steps 1 and 2, conditionally generate scores XT(k)=(XT(k,1),…,XT(k,p)) for the *k*th experimental predictor measure with dimension *p*. This step involves generating from $MVN\left(\mu_{XTk|Y,XA}, \Sigma_{XTk|Y,XA}\right)$MVN(MuXT(k)|Y,XA, the conditional distribution of XT(k) given (Y,XA), where $\mu_{XTk|Y,XA}$ and $\Sigma_{XTk|Y,XA}$ are the mean vector and covariance matrix obtained from the regression of XT(k) on (Y,XA).

This step is carried out *separately* for each of the six experimental predictor measures, but using the same simulated values for the ASVAB subtest and criterion scores generated in Steps 1 and 2. Holding the scores (XA,Y) fixed eliminates extraneous variance that would otherwise confound making comparisons among the experimental predictors in terms of their incremental validity and classification potential over the existing ASVAB.

This three step procedure was repeated 40 times for each of the three criterion measures (k = 40 replications). In addition, within each replication, we generated 10 secondary replications for cross-validation purposes.

Structuring the Covariance Matrix

The sequential generation of the predictor and criterion scores using conditional MVN distributions, as described above, does not require the full covariance matrix for the full vector (XA,Y,XT(1),…, XT(k),…,XT(6)). Given the total dimensions involved, constructing and generating directly from the full covariance matrix is not statistically feasible nor is it necessary for the analysis requirement. Instead, we only need to construct a covariance matrix that describes the relationship between (XA,Y,XT(k)), the full set of random vector simulated in the above three-step procedure using one experimental predictor at a time.

The structure of the covariance matrix for the *j*th MOS is shown below. Note that the covariances among the six experimental predictors are not needed and zeroed out, and that covariances corresponding to the ASVAB and experimental predictors are common across all MOS. Each application of the three-step procedure for the *j*th MOS employs only the components corresponding to Y, XA, and XT(k).

$$\Sigma_j = \begin{bmatrix} \Sigma_{Y_j,Y_j} & \Sigma_{Y_j,XA} & \Sigma_{Y_j,XT1} & \Sigma_{Y_j,XT2} & \cdots & \Sigma_{Y_j,XT6} \\ \Sigma_{XA,Y_j} & \Sigma_{XA,XA} & \Sigma_{XA,XT1} & \Sigma_{XA,XT2} & \cdots & \Sigma_{XA,XT6} \\ \Sigma_{XT1,Y_j} & \Sigma_{XT1,XA} & \Sigma_{XT1,XT1} & 0 & \cdots & 0 \\ \Sigma_{XT2,Y_j} & \Sigma_{XT2,XA} & 0 & \Sigma_{XT2,XT2} & \cdots & 0 \\ \cdots & \cdots & \cdots & \cdots & \cdots & \cdots \\ \Sigma_{XT6,Y_j} & \Sigma_{XT6,XA} & 0 & 0 & \cdots & \Sigma_{XT6,XT6} \end{bmatrix}$$

Constructing the Covariance Matrix

The covariance matrix Σ_j was constructed element-wise starting from the Army Class sample observations. An overview of the entire procedure is summarized below. Additional details are described in following sections of this appendix.

Step 1: Compute the correlations corresponding to components of the covariance matrix from the sample. To maximize information from the sample, pairwise-deletion was employed to handle missing observations. Pairwise predictor-criterion correlations (i.e.,

zero-order validities) involving the ALQ were corrected for criterion unreliability. Predictor-criterion correlations involving the MOS-specific JKT and PRS were not corrected for criterion unreliability. The output from this step is a sample correlation with components that describe the relationship between (XA,Y,XT(k)) in the sample:

$$R_{YXATk} = \begin{bmatrix} R_{Y,Y} & R_{Y,XA} & R_{Y,XTk} \\ R_{XA,Y} & R_{XA,XA} & R_{XA,XTk} \\ R_{XTk,Y} & R_{XTk,XA} & R_{XT1,XTk} \end{bmatrix}$$

The correlation matrix R_{YXATk} is already corrected for criterion unreliability, but not restriction in range. Because the correlations and subsequent corrections for criterion unreliability were obtained using pairwise computations, the resulting submatrix of correlations R_{YXATk} is not assured to be positive definite. The simulation described earlier in Section A1 is based on generating from a MVN distribution, which requires a positive definite covariance matrix.

Step 2: Adjust correlation matrix obtained in Step 1 so that all submatrix components corresponding to (XA,Y,XT(k)) are positive-definite. This step adjusts the submatrices R_{YXATk} (k=1,…,6) to be positive-definite. Section A4 summarizes the procedure for accomplishing this adjustment so that the components of in R_{YXATk} corresponding to (Y,XA) remain constant across all six experimental predictors.

Step 3: Compute the variances of predictor and criterion scores from the MOS sample. Correct the variances of criterion scores for unreliability by multiplying the sample variance by the applicable reliability coefficient.

Step 4: Compute the full covariance matrix for the MOS by multiplying the correlation matrix and variances obtained in Steps 2 and 3.

Step 5: Correct the covariance matrix for range-restriction (RR) by applying Lawley's (1943) multivariate correction multiple times in the following way.

(a) First, we computed the covariance of the ASVAB scores from FY 2004 Army accessions, the reference population used for RR correction. This covariance corresponds to the $\Sigma_{XA,XA}$ submarix in Σ_j.

(b) Second, using $\Sigma_{XA,XA}$ as the "population" ASVAB covariance, we applied the RR correction to the covariance of the ASVAB with each experimental predictor. The "restricted" covariances in this step were the ASVAB and predictor scores covariance computed using all MOS samples combined. This correction relates the total sample to the Army accession reference population. These computations produced the components $\Sigma_{XA,XTK}$, k=1 to 6.

(c) Third, using $\Sigma_{XA,XA}$ and $\Sigma_{XA,XTK}$ to form the "population" covariance of (XA, XTk), we again applied the RR correction to the covariance of (XA, XTk) with Y, separately for k=1 to 6. The "restricted" covariances in this step were the covariances of (Y,XA,XTk), k=1 to 6, computed using the *j*th MOS sample. These corrections relate each MOS sample to the Army accession reference population.

For each MOS, the six separate RR corrections produced corrected covariance components Σ_{Y_j,Y_j} and $\Sigma_{Y_j,XA}$ with unequal values across experimental predictors. To obtain common covariances corresponding to these components for all experimental predictors, we averaged the different covariances obtained from the six separate corrections.

Step 6: Adjust the covariance matrix obtained in Step 5 so that components corresponding to (Y, XA,XT(k)) are positive-definite matrices. This step is needed as the RR corrections and subsequent averaging of matrices in Step 5 do not ensure that the final covariance for (Y,XA,XT(k)) is positive definite. The procedure for accomplishing this is the same as that employed in Step 2.

Adjusting for Positive Definiteness

The adjustment in Step 2 is needed so to ensure that each submatrix R_{YXATk}, k=1 to 6, is positive definite. The same requirement is needed for the corresponding submatrices of the average covariance matrix in Step 5. This adjustment must be carried out separately across experimental predictors, but with the constraint that the submatrix corresponding to (Y,XA) be equal for k=1 to 6. This equality constraint is necessary to simulate the experimental predictor scores separately for k=1 to 6, but conditional on a common value for (Y,XA), as required in the simulation design. The procedure to accomplish this adjustment is described below using the correlation matrix.

Step 1: Adjust the component of the correlation matrix corresponding to (Y,XA), R_{YXATk}, to make it positive definite. Denote the adjusted correlation submatrix by

$$R^*_{YXA} = \begin{bmatrix} R^*_{Y,Y} & R^*_{Y,XA} \\ R^*_{XA,Y} & R^*_{XA,XA} \end{bmatrix}.$$

The computations involved in the adjustment are based on the eigenvalue-eigenvector decomposition of the correlation (covariance) matrix. In the first part of the adjustment, we zeroed out the negative eigenvalues and then recomputed the correlation matrix using the modified eigenvalues and the original eigenvectors. To eliminate the singularity in the resulting matrix, we added a "ridge constant" to the main diagonal and recomputed to obtain an appropriate correlation matrix (with diagonals elements equal to one).

Step 2: For k=1 to 6, adjust R_{YXATk}, the component of the matrix corresponding to (Y,XA,XT(k)), to make it positive definite using the same computations described in Step 1. We denote the adjusted correlation submatrix by

$$R^{**}_{YXATk} = \begin{bmatrix} R^{**}_{Y,Y} & R^{**}_{Y,XA} & R^{**}_{Y,XATk} \\ R^{**}_{XA,Y} & R^{**}_{XA,XA} & R^{**}_{XA,XATk} \\ R^{**}_{XATk,Y} & R^{**}_{XATk,XAk} & R^{**}_{XATk,XATk} \end{bmatrix}$$

Note that positive definite adjustments in this Step are independent of that in Step 1 and will likely produce (Y,XA) correlation components that are not exactly equal across k=1 to 6, each of which also will likely differ from R^{*}_{YXA} obtained in Step 1.

Step 3: Perform a post-adjustment to the covariance derived in Step 2 to produce a common covariance component for (Y,XA) that is equal to R^{*}_{YXA}. This is accomplished by pre- and post-multiplying the covariance from Step 2 by the matrix

$$I_{YAT}(k) = \begin{bmatrix} C_{YA} & 0 \\ 0 & I(p_k) \end{bmatrix}$$

where $I(p_k)$ is $p_k \times p_k$ the identity matrix, p_k equals the dimension of the *k*th experimental predictor, and C_{YA} is formed by the product of the Cholesky-roots of R^{*}_{YXA} and $R^{**}_{YXA(k)}$ (the (Y,XA) correlation component of R^{**}_{YXATk} obtained in Step 2), as described below:

$$C_{YA} = \left(C^{**}_{YXA(k)}\right)^{-1} C^{*}_{YXA}$$

where

$$R^{*}_{YXA} = \left(C^{*}_{YXA}\right)^{T} C^{*}_{YXA}$$

$$R^{**}_{YXA(k)} = \left(C^{**}_{YXA(k)}\right)^{T} C^{**}_{YXA(k)} = \begin{bmatrix} R^{**}_{Y,Y} & R^{**}_{Y,XA} \\ R^{**}_{XA,Y} & R^{**}_{XA,XA} \end{bmatrix}$$

Cross-Validate Composite Covariances

The metrics used in this research (incremental validity, Horst's *d*, MPCS) are functions of the covariance and/or correlation among the regression-weighted composites estimated from a given predictor set (ASVAB only or ASVAB+Experimental Predictor) for each MOS. The composites were estimated using ordinary least-squares regression. The 5x5 composite covariance matrix is given by:

$$Cov\left(\hat{Y},\hat{Y}\right) = R_{YX} R_{XX}^{-1} \left(R_{YX}\right)^{T}$$

Note that R_{YX} is the 5xp matrix of zero-order validities (one row for each MOS), and R_{XX} is the inter-correlation among the predictors. In standardized form, the diagonal elements of the covariance matrix are the R^2 of the five regression-weighted composites (one for each MOS), and the off-diagonal elements represent the inter-correlations among these five composites.

To adjust for shrinkage we carried out a Monte Carlo cross-validation in the following way. We generated 10 secondary replicates (or simulated cross-validation samples) for each of the 40 primary replications. For each of the 10 secondary replicates, we then obtained an adjusted R^2 coefficient by computing the percent variance in the replicate (or cross-validation) sample that was explained by predicted scores based on the regression-weighted composite derived from the primary replicate sample. The composite covariance was then recomputed using these adjusted R^2 coefficients. That is,

$$Cov\left(\hat{Y},\hat{Y} \mid cv\right) = R_{\hat{Y},cv}^{-1} \left(R_{\hat{Y}}^{-1} Cov\left(\hat{Y},\hat{Y}\right) R_{\hat{Y}}^{-1}\right) R_{\hat{Y},cv}^{-1}$$

where $R_{\hat{Y},cv}$ is the 5x5 diagonal matrix of adjusted R^2 coefficients and $R_{\hat{Y}}$ is the diagonal matrix of unadjusted R^2 coefficients.

APPENDIX D
SUMMARY OF THE INCREMENTAL VALIDITY AND CLASSIFICATION POTENTIAL OF CV PREDICTORS IN ADDITION TO THE ASVAB

Table D.1. Summary of the Incremental Validity and Classification Potential of the CV Predictor Measures in Addition to the ASVAB for Maximizing Performance-Related Criteria Averaged Across Five MOS

Criterion/Predictor	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*
MOS-Specific Job Knowledge Test (JKT)							
ASVAB	.66	.43	--	.50	--	.33	--
ASVAB + PSJT [1]	.76	.58	.15	1.12	.62	.44	.11
ASVAB + RBI [9]	.72	.52	.09	.92	.42	.46	.14
ASVAB + WSI [15]	.74	.55	.12	1.00	.50	.48	.16
ASVAB + WPA [14]	.78	.61	.18	1.28	.78	.53	.20
ASVAB + WVI [28]	.77	.60	.17	1.49	.99	.59	.27
ASVAB + AO [1]	.66	.43	.00	.53	.03	.34	.01
MOS-Specific Technical Performance Rating							
ASVAB	.36	.13	--	.46	--	.31	--
ASVAB + PSJT [1]	.40	.16	.03	.61	.14	.36	.05
ASVAB + RBI [9]	.57	.33	.20	1.01	.55	.47	.16
ASVAB + WSI [15]	.53	.28	.15	1.10	.64	.51	.20
ASVAB + WPA [14]	.65	.42	.29	1.44	.98	.57	.26
ASVAB + WVI [28]	.73	.53	.40	2.03	1.57	.69	.38
ASVAB + AO [1]	.36	.13	.00	.47	.00	.32	.01
Exhibits Effort and Professionalism Rating							
ASVAB	.43	.19	--	.85	--	.39	--
ASVAB + PSJT [1]	.44	.20	.01	.91	.06	.41	.02
ASVAB + RBI [9]	.60	.35	.17	1.34	.49	.54	.15
ASVAB + WSI [15]	.64	.41	.23	1.65	.80	.61	.22
ASVAB + WPA [14]	.65	.43	.24	1.53	.69	.58	.19
ASVAB + WVI [28]	.77	.60	.41	2.28	1.43	.73	.34
ASVAB + AO [1]	.44	.19	.01	.87	.03	.41	.02
Works Effectively with Others Rating							
ASVAB	.48	.23	--	1.23	--	.49	--
ASVAB + PSJT [1]	.49	.24	.01	1.24	.01	.50	.01
ASVAB + RBI [9]	.63	.40	.17	1.78	.55	.64	.15
ASVAB + WSI [15]	.65	.42	.18	1.90	.67	.67	.18
ASVAB + WPA [14]	.61	.38	.14	1.72	.49	.63	.14
ASVAB + WVI [28]	.76	.58	.34	2.38	1.15	.77	.28
ASVAB + AO [1]	.48	.23	.00	1.22	-.01	.49	.00
Demonstrates Physical Fitness Rating							
ASVAB	.35	.12	--	.58	--	.34	--
ASVAB + PSJT [1]	.35	.13	.00	.59	.01	.35	.00
ASVAB + RBI [9]	.63	.40	.28	1.33	.75	.54	.20
ASVAB + WSI [15]	.58	.34	.21	1.48	.90	.55	.21
ASVAB + WPA [14]	.58	.34	.21	1.43	.86	.55	.21
ASVAB + WVI [28]	.68	.46	.34	1.78	1.20	.66	.32
ASVAB + AO [1]	.36	.13	.00	.60	.02	.35	.01

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table D.2. Summary of the Classification Potential of the CV Predictor Measures in Addition to the ASVAB for Maximizing Performance-Related Criteria Averaged Across and by Five MOS

	Overall				MOS									
					11B		19K		25U		63B		68W	
	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
MOS-Specific Job Knowledge Test (JKT)														
ASVAB	.50	--	.33	--	.12	--	.19	--	.03	--	.79	--	.86	--
ASVAB + PSJT [1]	1.12	.62	.44	.11	.08	-.04	.16	-.03	1.27	1.25	.77	-.03	.81	-.06
ASVAB + RBI [9]	.92	.42	.46	.14	.19	.07	.31	.12	.65	.63	.86	.06	.91	.05
ASVAB + WSI [15]	1.00	.50	.48	.16	.21	.09	.45	.26	.77	.75	.84	.05	.73	-.13
ASVAB + WPA [14]	1.28	.78	.53	.20	.16	.04	.44	.25	.97	.94	.96	.17	.95	.09
ASVAB + WVI [28]	1.49	.99	.59	.27	.25	.13	.83	.64	.38	.35	1.18	.39	.98	.12
ASVAB + AO [1]	.53	.03	.34	.01	.15	.02	.23	.04	.03	.00	.79	.00	.83	-.03
MOS-Specific Technical Performance Rating														
ASVAB	.46	--	.31	--	.07	--	.45	--	.75	--	.36	--	.48	--
ASVAB + PSJT [1]	.61	.14	.36	.05	.11	.04	.47	.02	1.03	.28	.35	-.02	.47	-.01
ASVAB + RBI [9]	1.01	.55	.47	.16	.10	.03	.41	-.04	1.07	.32	.96	.60	.66	.18
ASVAB + WSI [15]	1.10	.64	.51	.20	.19	.12	.64	.19	1.18	.43	.53	.17	.78	.30
ASVAB + WPA [14]	1.44	.98	.57	.26	.02	-.04	.89	.44	1.45	.70	.81	.45	.96	.48
ASVAB + WVI [28]	2.03	1.57	.69	.38	.14	.07	1.11	.66	.94	.19	1.36	1.00	1.06	.58
ASVAB + AO [1]	.47	.00	.32	.01	.11	.04	.44	-.01	.73	-.02	.35	-.01	.46	-.02
Exhibits Effort and Professionalism Rating														
ASVAB	.85	--	.39	--	.19	--	.55	--	1.22	--	.19	--	.35	--
ASVAB + PSJT [1]	.91	.06	.41	.02	.20	.01	.55	.01	1.23	.01	.18	-.01	.47	.12
ASVAB + RBI [9]	1.34	.49	.54	.15	.28	.09	.51	-.04	1.33	.11	.75	.56	.52	.17
ASVAB + WSI [15]	1.65	.80	.61	.22	.24	.05	.59	.04	1.46	.24	.82	.63	.89	.54
ASVAB + WPA [14]	1.53	.69	.58	.19	.23	.04	.93	.38	1.39	.17	.72	.52	.47	.12
ASVAB + WVI [28]	2.28	1.43	.73	.34	.28	.09	1.12	.57	1.24	.01	1.29	1.10	.75	.40
ASVAB + AO [1]	.87	.03	.41	.02	.24	.04	.54	-.01	1.22	.00	.23	.04	.34	-.01

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table D.2. (Continued)

	Overall				MOS									
					11B		19K		25U		63B		68W	
	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
Works Effectively with Others Rating														
ASVAB	1.23	--	.49	--	.29	--	.67	--	1.41	--	.20	--	.47	--
ASVAB + PSJT [1]	1.24	.01	.50	.01	.29	.00	.65	-.02	1.41	.00	.27	.07	.48	.00
ASVAB + RBI [9]	1.78	.55	.64	.15	.29	.00	.68	.01	1.47	.06	1.03	.83	.57	.09
ASVAB + WSI [15]	1.90	.67	.67	.18	.37	.09	.64	-.02	1.50	.09	.70	.50	.90	.43
ASVAB + WPA [14]	1.72	.49	.63	.14	.38	.10	.90	.24	1.46	.04	.50	.30	.55	.08
ASVAB + WVI [28]	2.38	1.15	.77	.28	.38	.09	1.03	.36	1.29	-.12	1.18	.99	.84	.37
ASVAB + AO [1]	1.22	-.01	.49	.00	.29	.00	.66	-.01	1.41	.00	.19	-.01	.48	.01
Demonstrates Physical Fitness Rating														
ASVAB	.58	--	.34	--	.05	--	.30	--	.73	--	.73	--	.53	--
ASVAB + PSJT [1]	.59	.01	.35	.00	.05	.00	.32	.02	.74	.01	.75	.02	.53	.00
ASVAB + RBI [9]	1.33	.75	.54	.20	.17	.12	.40	.10	1.38	.64	.95	.22	.69	.17
ASVAB + WSI [15]	1.48	.90	.55	.21	.09	.04	.38	.08	1.53	.79	1.03	.30	.88	.36
ASVAB + WPA [14]	1.43	.86	.55	.21	.06	.00	.91	.61	1.30	.57	.88	.15	.77	.24
ASVAB + WVI [28]	1.78	1.20	.66	.32	.18	.13	1.01	.71	.80	.07	1.24	.51	1.09	.56
ASVAB + AO [1]	.60	.02	.35	.01	.06	.01	.29	-.01	.74	.01	.73	.00	.57	.04

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table D.3. Summary of the Incremental Validity and Classification Potential of the CV Predictor Measures in Addition to the ASVAB for Maximizing Army-Wide Retention-Related Criteria Averaged Across Five MOS

	Criterion													
	Satisfaction with Army							Attrition Cognitions						
Predictor	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*
ASVAB	.21	.04	--	.23	--	.22	--	.33	.11	--	.50	--	.31	--
ASVAB + PSJT [1]	.34	.11	.07	.39	.16	.30	.08	.38	.14	.03	.54	.03	.33	.02
ASVAB + RBI [9]	.68	.47	.42	.88	.65	.46	.24	.74	.55	.44	1.12	.61	.52	.21
ASVAB + WSI [15]	.63	.39	.35	1.46	1.24	.56	.34	.63	.39	.28	1.57	1.06	.61	.30
ASVAB + WPA [14]	.54	.30	.25	1.06	.83	.50	.28	.68	.47	.36	1.73	1.22	.61	.30
ASVAB + WVI [28]	.66	.44	.39	1.40	1.17	.59	.37	.79	.63	.52	2.20	1.70	.73	.41
ASVAB + AO [1]	.24	.06	.01	.29	.06	.25	.03	.36	.13	.02	.64	.14	.35	.04
	Perceived Army Fit							Career Intentions						
Predictor	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*
ASVAB	.46	.21	--	.96	--	.47	--	.12	.01	--	.09	--	.13	--
ASVAB + PSJT [1]	.47	.22	.01	1.00	.04	.49	.01	.17	.03	.01	.14	.05	.17	.04
ASVAB + RBI [9]	.71	.51	.30	1.87	.91	.69	.21	.61	.37	.36	.66	.56	.38	.25
ASVAB + WSI [15]	.66	.43	.22	1.71	.75	.66	.19	.53	.29	.27	1.40	1.31	.52	.39
ASVAB + WPA [14]	.70	.49	.28	2.15	1.19	.74	.27	.56	.31	.30	1.49	1.39	.53	.40
ASVAB + WVI [28]	.78	.60	.39	2.30	1.34	.77	.30	.73	.54	.52	1.72	1.63	.65	.51
ASVAB + AO [1]	.48	.23	.02	1.07	.10	.49	.02	.17	.03	.02	.20	.11	.19	.06

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table D.4. Summary of the Classification Potential of the CV Predictor Measures in Addition to the ASVAB for Maximizing Army-Wide Retention-Related Criteria Averaged Across and by Five MOS

	Overall				MOS									
					11B		19K		25U		63B		68W	
Predictors	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
Satisfaction with the Army														
ASVAB	.23	--	.22	--	.08	--	.36	--	.42	--	.36	--	.22	--
ASVAB + PSJT [1]	.39	.16	.30	.08	.15	.07	.56	.20	.54	.12	.30	-.06	.30	.08
ASVAB + RBI [9]	.88	.65	.46	.24	.36	.28	.43	.07	.75	.33	.68	.32	.33	.12
ASVAB + WSI [15]	1.46	1.24	.56	.34	.20	.11	.86	.50	1.50	1.08	.73	.37	.46	.24
ASVAB + WPA [14]	1.06	.83	.50	.28	.14	.06	1.09	.73	.66	.24	.64	.28	.74	.53
ASVAB + WVI [28]	1.40	1.17	.59	.37	.30	.22	.76	.40	.55	.14	.71	.35	1.21	.99
ASVAB + AO [1]	.29	.06	.25	.03	.10	.02	.40	.04	.52	.10	.39	.03	.19	-.02
Perceived Army Fit														
ASVAB	.96	--	.47	--	.28	--	.37	--	1.00	--	.66	--	.56	--
ASVAB + PSJT [1]	1.00	.04	.49	.01	.29	.01	.39	.02	1.02	.02	.67	.01	.57	.01
ASVAB + RBI [9]	1.87	.91	.69	.21	.59	.31	.67	.30	1.29	.29	.63	-.03	.56	.00
ASVAB + WSI [15]	1.71	.75	.66	.19	.46	.17	.86	.48	1.11	.11	.67	.02	.73	.17
ASVAB + WPA [14]	2.15	1.19	.74	.27	.50	.22	.59	.22	1.39	.39	1.06	.40	.78	.22
ASVAB + WVI [28]	2.30	1.34	.77	.30	.50	.21	.68	.31	.93	-.07	1.20	.54	1.17	.61
ASVAB + AO [1]	1.07	.10	.49	.02	.28	-.01	.36	-.01	1.16	.17	.64	-.02	.60	.04

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table D.4. (Continued)

Predictors	Overall				MOS									
					11B		19K		25U		63B		68W	
	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
Attrition Cognitions														
ASVAB	.50	--	.31	--	.10	--	.33	--	.87	--	.29	--	.53	--
ASVAB + PSJT [1]	.54	.03	.33	.02	.14	.04	.32	-.01	.86	-.02	.31	.02	.54	.02
ASVAB + RBI [9]	1.12	.61	.52	.21	.27	.18	.53	.21	.88	.01	.95	.66	.53	.00
ASVAB + WSI [15]	1.57	1.06	.61	.30	.38	.28	.41	.08	1.39	.51	.92	.63	.57	.04
ASVAB + WPA [14]	1.73	1.22	.61	.30	.19	.09	1.07	.75	1.32	.45	.58	.30	.91	.38
ASVAB + WVI [28]	2.20	1.70	.73	.41	.21	.11	1.19	.86	1.01	.14	1.12	.83	1.22	.69
ASVAB + AO [1]	.64	.14	.35	.04	.10	.00	.31	-.01	.94	.07	.27	-.02	.74	.21
Career Intentions														
ASVAB	.09	--	.13	--	.04	--	.24	--	.15	--	.20	--	.10	--
ASVAB + PSJT [1]	.14	.05	.17	.04	.17	.13	.24	.00	.15	-.01	.29	.09	.08	-.02
ASVAB + RBI [9]	.66	.56	.38	.25	.05	.01	1.02	.78	.37	.22	.90	.71	.24	.14
ASVAB + WSI [15]	1.40	1.31	.52	.39	.18	.14	.67	.43	1.48	1.32	.67	.47	.50	.39
ASVAB + WPA [14]	1.49	1.39	.53	.40	.08	.04	1.00	.76	1.33	1.17	.56	.37	.76	.66
ASVAB + WVI [28]	1.72	1.63	.65	.51	.13	.09	.82	.57	1.20	1.05	1.00	.80	1.25	1.14
ASVAB + AO [1]	.20	.11	.19	.06	.05	.01	.23	-.01	.56	.41	.22	.03	.09	-.01

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table D.5. Summary of the Incremental Validity and Classification Potential of the CV Predictor Measures in Addition to the ASVAB for Maximizing MOS-Specific Retention-Related Criteria Averaged Across Five MOS

	Criterion													
	Satisfaction with MOS							Perceived Competence						
Predictor	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*
ASVAB	.34	.12	--	.44	--	.29	--	.40	.16	--	.70	--	.41	--
ASVAB + PSJT [1]	.37	.14	.02	.49	.05	.31	.02	.45	.20	.05	.93	.23	.46	.05
ASVAB + RBI [9]	.58	.33	.22	.82	.38	.44	.15	.69	.48	.32	1.29	.58	.57	.16
ASVAB + WSI [15]	.65	.42	.30	1.61	1.17	.58	.29	.69	.48	.33	1.80	1.10	.68	.27
ASVAB + WPA [14]	.69	.48	.36	1.62	1.18	.60	.31	.73	.53	.38	1.48	.77	.61	.19
ASVAB + WVI [28]	.65	.42	.30	1.50	1.06	.60	.31	.79	.63	.47	2.31	1.60	.79	.38
ASVAB + AO [1]	.38	.15	.03	.57	.13	.33	.04	.43	.19	.03	.84	.14	.45	.04
	Perceived MOS Fit							MOS Exceeds Expectations						
Predictor	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*R*	R^2	ΔR^2	H_d	ΔH_d	*MPCS*	Δ*MPCS*
ASVAB	.19	.04	--	.17	--	.18	--	.33	.11	--	.44	--	.33	--
ASVAB + PSJT [1]	.27	.07	.04	.25	.08	.24	.05	.43	.18	.07	.61	.17	.37	.05
ASVAB + RBI [9]	.74	.55	.51	.72	.55	.40	.22	.68	.47	.36	1.24	.81	.55	.22
ASVAB + WSI [15]	.61	.37	.34	1.30	1.13	.53	.35	.59	.34	.23	1.34	.91	.57	.24
ASVAB + WPA [14]	.69	.47	.43	1.92	1.75	.62	.43	.65	.42	.31	1.52	1.09	.61	.28
ASVAB + WVI [28]	.74	.54	.50	1.65	1.47	.63	.44	.76	.58	.47	1.89	1.46	.70	.37
ASVAB + AO [1]	.27	.07	.04	.37	.20	.26	.08	.37	.14	.03	.59	.15	.36	.03

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table D.6. Summary of the Classification Potential of the CV Predictor Measures in Addition to the ASVAB for Maximizing MOS-Specific Retention-Related Criteria Averaged Across and by Five MOS

	Overall				MOS									
					11B		19K		25U		63B		68W	
Predictors	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
Satisfaction with MOS														
ASVAB	.44	--	.29	--	.11	--	.38	--	.43	--	.18	--	.76	--
ASVAB + PSJT [1]	.49	.05	.31	.02	.13	.02	.46	.08	.41	-.02	.15	-.03	.78	.02
ASVAB + RBI [9]	.82	.38	.44	.15	.30	.19	.71	.33	.72	.29	.20	.03	.61	-.15
ASVAB + WSI [15]	1.61	1.17	.58	.29	.25	.15	1.02	.63	1.38	.95	.37	.19	.68	-.09
ASVAB + WPA [14]	1.62	1.18	.60	.31	.17	.06	.83	.45	1.23	.80	.95	.78	.79	.03
ASVAB + WVI [28]	1.50	1.06	.60	.31	.27	.16	.74	.36	.54	.12	1.10	.92	1.02	.26
ASVAB + AO [1]	.57	.13	.33	.04	.10	-.01	.50	.12	.58	.15	.22	.04	.80	.04
Perceived MOS Fit														
ASVAB	.17	--	.18	--	.07	--	.30	--	.22	--	.26	--	.31	--
ASVAB + PSJT [1]	.25	.08	.24	.05	.17	.10	.28	-.02	.27	.05	.19	-.08	.44	.13
ASVAB + RBI [9]	.72	.55	.40	.22	.36	.29	.70	.40	.17	-.05	.48	.22	.34	.02
ASVAB + WSI [15]	1.30	1.13	.53	.35	.25	.17	.77	.47	1.41	1.19	.52	.25	.45	.13
ASVAB + WPA [14]	1.92	1.75	.62	.43	.15	.08	1.11	.81	1.20	.99	.68	.42	.99	.68
ASVAB + WVI [28]	1.65	1.47	.63	.44	.25	.18	1.00	.70	.74	.52	.79	.53	1.15	.84
ASVAB + AO [1]	.37	.20	.26	.08	.09	.02	.32	.02	.68	.46	.31	.04	.38	.07

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.

Table D.6. (Continued)

Predictors	Overall				MOS									
					11B		19K		25U		63B		68W	
	H_d	ΔH_d	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*	*MPCS*	Δ*MPCS*
Perceived Competence														
ASVAB	.70	--	.41	--	.30	--	.19	--	.86	--	.53	--	.52	--
ASVAB + PSJT [1]	.93	.23	.46	.05	.33	.03	.24	.05	1.03	.17	.62	.09	.48	-.04
ASVAB + RBI [9]	1.29	.58	.57	.16	.50	.21	.69	.50	.82	-.04	.52	-.01	.52	.00
ASVAB + WSI [15]	1.80	1.10	.68	.27	.37	.07	.92	.73	1.32	.46	.85	.31	.69	.17
ASVAB + WPA [14]	1.48	.77	.61	.19	.37	.07	.63	.44	1.24	.39	.80	.27	.60	.07
ASVAB + WVI [28]	2.31	1.60	.79	.38	.47	.18	.95	.76	.95	.09	1.16	.62	1.11	.58
ASVAB + AO [1]	.84	.14	.45	.04	.28	-.01	.24	.05	.86	.01	.53	-.01	.76	.23
MOS Exceeds Expectations														
ASVAB	.44	--	.33	--	.33	--	.19	--	.57	--	.27	--	.30	--
ASVAB + PSJT [1]	.61	.17	.37	.05	.32	-.01	.17	-.02	.98	.41	.21	-.06	.38	.08
ASVAB + RBI [9]	1.24	.81	.55	.22	.57	.24	.44	.26	1.20	.63	.27	.01	.32	.02
ASVAB + WSI [15]	1.34	.91	.57	.24	.42	.08	.67	.48	1.16	.60	.61	.35	.37	.07
ASVAB + WPA [14]	1.52	1.09	.61	.28	.42	.08	.69	.50	1.14	.57	.70	.44	.56	.26
ASVAB + WVI [28]	1.89	1.46	.70	.37	.44	.11	.52	.34	.75	.18	1.14	.87	1.16	.86
ASVAB + AO [1]	.59	.15	.36	.03	.32	-.01	.20	.01	.88	.31	.28	.01	.28	-.02

Note. H_d = Horst's d. MPCS = Mean predicted criterion score. 11B = Infantryman. 19K = Armor Crewman. 25U = Signal Support Specialist. 63B = Light Wheeled Vehicle Mechanic. 68W = Health Care Specialist. Reported values represent means averaged across 40 replications and the 10 additional cross-validation samples simulated within each replication. Sample sizes were the same for each of the 40 replications and 10 cross-validation samples. Bracketed numbers are the number of scores included for each predictor.